



The obstacle race: women in MANUAL TRADES still have to overcome the hurdles of ignorance and prejudice. Felicity Jones examines the problems and looks at the development of women's training workshops (page 12)

... after extra time. S. Gorley Putt looks at HENRY JAMES's renewed burst of activity in old age, a period that brought perhaps his best and most characteristic work (page 13)

What stopped the clock? Brian Bloomfield takes a second look at the Limits to Growth debate and its message of ENVIRONMENTAL CATASTROPHE (page 14)

"Damned by the praise that quenches all desire", BEN JOHNSON inhabits a curious position in English literary and theatre history, routinely praised but little liked. J. R. Mulryne reviews Anne Barton's reevaluation of one of our greatest dramatists (page 16)

Robotics, IT, social psychology, maths, computing, physics, biology, engineering, land use and more. Eight pages of reviews of SCIENCE JOURNALS (1 to 11)

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Tenure: the next round

In its public advice to Sir Keith Joseph, the University Grants Committee skates over the treacherous subject of tenure. In the (private) advice which the Secretary of State expects to receive from the committee within the next two months on the detailed implementation of his decision to abolish tenure, the UGC will have to be more candid.

In last week's advice the UGC simply acknowledged that Sir Keith had announced his intention that all universities should be able to dismiss on grounds of redundancy or financial exigency all academics appointed after a specified date. It added rather evasively: "This is an important matter on which we would wish to be consulted: we are particularly concerned that academic freedom should be safeguarded in any changes that are made. However, any changes will have little or no effect on the universities' staffing problems over the period covered by this advice."

The committee went on to say that more significant in the short term would be the universities' ability to sack existing teachers for not doing their jobs properly. According to the UGC it was important that universities should have power to do so under the "good cause" clause in their statutes. The committee offered to comment on this if asked, but did not regard its long-range advice as the appropriate place to do so.

In this preliminary and rather opaque statement of its view of tenure the UGC is both right and wrong. It is right

to play down the actual significance of Sir Keith's decision to abolish tenure on the management of universities. No disinterested observer seriously believes that this can do anything to promote either their effectiveness or their flexibility this side of the next century. It is wrong to insinuate that tougher "good cause" clauses can help to shake out incompetent or negligent teachers. Again, no disinterested observer seriously believes that universities do not dismiss such teachers because of legalistic obstacles; it is clear that in nearly every case the true obstacles are the civility and the solidarity of the academic profession.

In any case the UGC will be expected to harden up its attitude to tenure within a matter of weeks rather than months. Sir Keith has already taken up its offer to help tighten up "good cause" clauses in university statutes and also expects to receive its collaboration in his wider plan to hobble tenure. The probable response of the committee will be to argue that the Secretary of State's determination in this matter is unalterable so outright objection to plan would be in vain, and that it is the UGC's duty to make the best of a bad job and to persuade Sir Keith to accept some essential safeguards.

At one level this is reasonable enough. First, it is convenient because the members of the UGC do not have to hammer out a common view of tenure - which might be difficult when some are so clearly more attached to the principle than others. Second, it is

important to secure those safeguards. Financial exigency must be objectively and accountably defined if it is to be used as an excuse to dismiss university teachers in permanent employment. The wrangle between the mineworkers and the National Coal Board about the definition of "unreasonable" pits should be a sufficient reminder of the need for the fair and precise definition of apparently common-sense terms. Similarly a code to regulate the definition and application of redundancy must be worked out.

But on another level the UGC's probable "heads-down" attitude to tenure would foreclose a vital debate on a range of crucial issues - the status and autonomy of the academic profession, the proper balance between a collegial spirit and managerial effectiveness within universities, and of course the protection of academic freedom. For the UGC is surely wrong to suggest, as it did in last week's advice, that academic freedom can be adequately protected without some guarantee of employment that is in the issue of the morale of the profession. The UGC has argued persuasively for the need to recruit more and better staff into universities after the debilitating freeze of the last four or five years. But how is this to be achieved if the status of the profession of university teacher is degraded by the arbitrary abolition of its most conspicuous privilege? The UGC may be forced by political necessity to duck such issues for the moment but it cannot behave as if they do not exist.



Reading Kenneth Williams's diary *Back Drop* during the summer (having nothing better to do, or maybe just searching desperately for something funny at the end of a harrowing academic year) I was astonished to find that he had chosen to read on a BBC programme *I Make Me Laugh* a passage from Chesterton's *Notting Hill* that I had thought I was alone in finding funny. It is one of Auberon Quin's stories when he is trying to explain the nature of humour:

"In a hollow of the grey-green hills of rainy Ireland, lived an old woman, whose uncle was always Cambridge at the Race. But in her grey-green hollow, she knew nothing of this; she didn't know there was a Race. Also she did not know that she had an uncle. She had heard of nothing at all, except of George the First, of whom she had heard (I know not why), and in whose historical memory she put her simple trust. And by and by, in God's good time, it was discovered that this uncle of hers was not really her uncle, and they came and told her so. She smiled through her tears and said only, 'Virtue is its own reward'."

Kenneth Williams describes that as a "wonderfully dotty" speech and agrees with him. I thought it so dotty when I was at school - and used in those happy days to put together material for as many variety concerts as my fellow pupils would tolerate - that I learned it by heart and recited it at concert.

I persuaded my co-authors to write an even more dotty sketch for another concert, based upon the profoundly tragic *Raiders of the Sea*, in which we all agreed for tragic news and got so allured of waiting that we went to bed. The unfavourable reception at the end encouraged us to do it again, with even more powerful Irish accents. No one had the faintest idea what we were doing.

And neither did we. But it occurs to me now that we were ahead of our time. The last for wholly absurd incident with (possibly) some half-hidden meaning had to wait for its fuller expression until the Goons and Monty Python.

I suppose the succession of non-sequiturs turns out to have a deeper and rather frightening reality. "They'll never find us here," gasped Seagoon, bolting the warehouse door after a desperate chase. "Don't be daft," said Eccles. "Where else could they find us?" What surprises me still more is the fact that G. K. Chesterton wrote *The Napoleon of Notting Hill* in 1904, at which time it must surely have seemed even more dotty than it does now. I have read it again, to remind myself of the main story, about Auberon being elected king and about the arming of all the London boroughs, with Notting Hill (motto - Nothing Ill) under the command of the blazingly red-haired Adam Wayne, defeating all the others in protest against a main road that would have destroyed a few shops in Pump Street. The slaughter in the last battle is colourful and colossal. It is not only dotty. It is also amazingly right, which of course it was meant to be. For the events described in 1904 were supposed to take place 80 years ahead, which is this very year. Roads are still disputed. And perhaps Ken Livingstone has become the Napoleon, if not of Notting Hill, then of the greater London which encloses it.

Patrick Nutgens

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Engineers step up campaign to earmark cash

by Jon Turney
Science Correspondent

The Engineering Council this week raised the temperature of the debate on boosting science and engineering courses in universities with a strong attack on the University Grants Committee procedure, timed to coincide with Treasury evaluation of a £100m bid for new money for engineering from the Department of Education and Science.

The council's attack, from Dr Kenneth Miller, its director general, criticized the UGC for ignoring the question of earmarking funds for engineering in its report on *A Strategy for Higher Education in the 1990s*.

But the council's comments were also directed at ministers negotiating this year's public expenditure bids. The DES last week submitted proposals to the Treasury which would provide 2,000 more engineering undergraduates, a large increase in part-time engineering students and conversion courses for engineers.

Dr Miller said: "The Engineering Council is convinced that the Government must adopt a policy of earmarking funds for engineering over a five-year period, not only to achieve the switch but also to safeguard the resources for engineering." He made it clear he did not believe the universities would shift money towards engineering voluntarily, and argued for earmarking of existing engineering spending as well as any new money.

The response to the 1981 cuts had shown this was necessary to protect engineering spending.

He cited the scheme for "new blood" lecturers to support his call for earmarking. "If the UGC had had a free hand they would have spread new blood across the board," Dr Miller said. But Sir Keith Joseph, Secretary of State for Education and Science, had insisted most of the money was earmarked for science. "The UGC needs firm direction from the Secretary of State," he said.

Dr Miller also outlined a role for industry in offering secondments and generous consultancies to university engineering lecturers. He said there should be differential take-home pay for engineering teachers with their income made up to the levels they could earn in industry by contributions from companies.

Industry's willingness to back new educational initiatives will also be important for the Engineering Council, whose initial three-year Government funding ends next year.

ary of State," he said.

Dr Miller, a former member of the UGC, also repeated the council's call in its policy document earlier this year for a 10 per cent switch from arts to science and engineering. The council asked for an extra 4,000 engineering places, mainly in the universities, by 1989. The current DES plan seeks half this increase, but places more emphasis on short-term conversion courses.

The council's original policy document said there was an urgent need to boost engineering training to ensure an adequate supply of qualified people for industry. It is anxious to keep up the momentum behind this proposal and members believe the review of skill shortages in the information technology industry by Mr John Butcher, the junior industry minister, has helped convince ministers and officials of the need to make long-term plans for engineering education.

The UGC itself has followed up the Butcher committee's report with a letter to universities asking them to outline their requirements for secondment of lecturers from industry.

Sir Peter Swire, Secretary of State for Education and Science, says industrialists on the Butcher committee indicate they may be willing to second key staff members for one day a week for teaching duties. He invites universities to name individuals they would like to make use of through such a scheme if they can.

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Court hears poly case

by Karen Gold

A judicial compromise over identifying photographs of student pickets at the Polytechnic of North London was proposed in the High Court this week. Mr Justice Kennedy suggested the compromise solution to counsel for the polytechnic, 13 lecturers and Mr Patrick Harrington, the PNI student and National Front student organizer.

The court heard Mr Harrington's application to enforce a previous court order on the polytechnic and on two lecturers, to identify photographs of student participants in a demonstration at the polytechnic last May in breach of an injunction forbidding them to hinder Mr Harrington's access to the polytechnic.

The lecturers maintained in court that they should not have to identify photographs because this would damage their student relationships. Disclosure of names to the National Front might endanger the students identified, they claimed.



Architects: building a better tomorrow, 12

VAT on books 'would have tragic implications'

by Ngajo Crequer

Demand for books could fall by between 15 and 25 per cent if Value Added Tax was imposed, according to research carried out for the National Book Committee.

This and other findings will be presented to the Treasury, the Department of Education and Science, MPs and ministers, as part of the campaign to prevent VAT on books and periodicals being imposed in the spring



When it came to awards at the Chicago International film festival, this team from the BBC Open University production centre was not left out in the cold. Their programme *On the Right Track* gained the silver plaque in the science and technical category.

Programme presenter Mark Endean (left), producer Kevin Newport and production assistant Anne Cafferky, are pictured trying out the snowmobiles used in filming the programme on polymer engineering. The three other BBC OU films entered for the festival also won awards.

Four schools to close in architecture shake-up

by Paul Flather

The National Advisory Body is considering swift action to reduce the flow of architecture students from next year following publication of a report this week calling for numbers qualifying in the profession to be stabilized as soon as possible.

The report, from a transitory architecture group set up by the NAB and the University Grants Committee 16 months ago under the chairmanship of Lord Esher, calls for a reduction of 300 places to be achieved by the closure of up to four of the 36 recognized schools, mergers and cuts in intake.

The group of senior academics and professionals has made no recommendations on how the closures and cuts might be achieved, but it has urged the NAB and the UGC to act quickly, particularly in reducing numbers in the public sector schools which have grown fastest in the 1980s.

University intakes have been generally steady, and in some cases have fallen. The group concludes that the workload for architects is not likely to increase in line with the projected increase in numbers. It calls for the profession to be stabilized at the size it will reach when all current students qualify, a total of 31,000 which compares with 20,000 in the early 1960s.

The report singles out London, the north-west of England, Yorkshire and

Scotland as areas which should suffer the greatest cuts because of their high provision, with mergers recommended particularly in the Inner London Education Authority and Scotland.

Some members of the NAB board, which discussed the report this week, felt it should go further than the Esher recommendations and aim to reduce part one and part two intakes as soon as possible. The report called for part one reductions from 1985, and part two cuts from 1989.

The main Esher recommendation is for intakes to part two - taken after an initial three years leading to part one plus a year of outside practice - to be reduced by 300 or 15 per cent by 1989. But the group accepts this will mean reductions in part one intakes as well. It stressed, however, that it regards part one as an academic course with merit in its own right, equipping students for a wide range of careers in the environmental field.

Lord Esher said his group had not been influenced by political considerations. It had reached its decisions unanimously after considerable discussion based on the evidence. Mr David Hancock, permanent secretary at the Department of Education and Science, has made clear the DES wants to see architecture numbers reduced.

Design for the future, page 12 and 13
Leader, back page

Low award fuels AUT pay fears

by David Jobbins

Union leaders are furious that this week's 4.6 per cent recommended pay rise for university academics barely halts the continued erosion of their salary levels compared with other key groups.

And they are pinning their hopes on a joint approach with vice chancellors to the Department of Education and Science to underline the need for urgent action in the next pay round.

The independent chairman of committee A, Sir Alexander Johnston, fixed the recommended award at 4.6 per cent across the board with £150 extra for about 8,500 staff stuck in a promotion blockage at the top of the lecturer scale.

The total package is worth 4.85 per cent, a mere 0.1 per cent more than the 4.75 per cent rejected by the Association of University Teachers' negotiators in July. It means that some senior academics would have been slightly better off if the earlier deal had been accepted but gives an extra £129 for the lecturers on the top point of the basic grade. To them the rise is worth more than 5.4 per cent.

Sir Alexander's recommendation was being sent to Sir Keith Joseph, Secretary of State for Education and Science, this week, and he was not expected to try to block an award which is broadly in line with the arbitration award to further education lecturers.

The extra money for those in the promotion blockage has the effect of turning the tables on polytechnic staff who have over the years been narrowing the universities' lead. A university lecturer on the top point now has a 6 per cent lead over a polytechnic senior lecturer compared with 5 per cent last year.

But the key relativity for the AUT is with clinical academics who have received a 6.9 per cent two-stage award which although worth only 4.6 per cent this year jacks up the starting point for the 1985 pay round.

The clinical professors' lead over the non-clinical average will be almost 23 per cent compared with 20 per cent at the beginning of negotiations, and only 2 per cent in 1979.

Mr John Akker, deputy general secretary of the AUT, said the widening gap was causing widespread anger. He criticized the vice chancellors for failing to move on structural questions, attacking the university authorities' panel for "showing a lack of imagination in relation to the problems the profession faces".

Mr Brian Taylor, secretary general of the Committee of Vice Chancellors and Principals, said that universities were left with the problem of meeting the award from the 3 per cent allowed in the recurrent grant, and would suffer severe knock-on effects in future years.

The university employers had argued almost exclusively on their ability to pay during negotiations when the AUT floated the idea of a staged award.

Recommended pay scales, page 4
Leader, back page

Letters to the editor

The two cultures: still a bridge too far

Sir, - Paul Flather's report, "Breaking down the barriers of learning" (THE, September 14), brings welcome news about the growing movement towards interdisciplinary programmes in British higher education. I was surprised, however, that no reference was made to the long-established and truly interdisciplinary fields of the history and social studies of science and technology. Not only do these entail historical, economic, political, demographic, literary, philosophical and sociological analyses of groups, individuals, ideas, techniques and their large-scale contexts; they also necessarily involve students and researchers in more or less solid appreciations of the sciences, technologies and mathematics around which their studies focus.

Such appreciation enables even the most hardened "arts person" to gain at least some inkling of the nature and function of modern scientific and technological activities, while science-

orientated students learn respect for more traditional arts-based methods. It was with such aims in mind that the University of Sussex and some other new universities in the 1960s made the history and social studies of science a requirement for all undergraduates. The system broke down precisely for the reasons mentioned in your report - viz. student preference for "real" disciplines and staff intransigence over the allocation of resources to such unusual fields. I believe the Open University's early history of science and technology courses folded for similar reasons. The few such programmes which survived the 1970s have indeed been further squeezed by the pressures of the past five years of increased financial stringency.

So, I wish the new interdisciplinary movements well, but I urge them to take heed of the lessons taught by the unhappy fate of the history and social studies of science and technology.

Those of us who thought in the 1960s and early 1970s that we had finally bridged the "two cultures", as well as laying the foundation of real interdisciplinary research and teaching, have spent the last decade fighting rear-guard actions, retreating, and finally losing a very important war. Good luck to the new armies; they'll need it.

Yours faithfully,
JAMES FRIDAY,
(now a mere science writer),
213 Fifth Park Road,
Sheffield.

Sir, - I was pleased to see your report on the new MA in critical theory at Nottingham University (THE, September 14). In spite of your reassuring headline, however, some readers might wonder whether "the likely difficulties of blending staff from half a dozen departments" and "the prospect of little demand" have materialized or

not. So far as the first of these is concerned, no such problem ever existed. As your report implies, the group of staff had already cohered and been meeting together regularly for several years before the MA course was launched. I do not know of any other British university with such a wealth of young staff from different academic areas committed to following and contributing to developments in this field and working as a group not only in teaching but also for the purposes of publication. As to demand, we are expecting a new intake of between 10-15 students for the second year running.

Yours faithfully,
MALCOLM V. JONES
Chairman of the MA course in critical theory,
Dean of the faculty of arts,
Nottingham University.

Graduate production

Sir, - Correspondence generated by your article "The Production Line" (THE, September 7) has raised some interesting points. The relationship between "entry quality" and "graduate quality" have been questioned by Peter Copping (THE, September 14) and by Dr. G. Payne and I. C. McManus (THE, September 21). In the interest of space, our list of assumptions was editorially excised and we are not at odds with most of the sentiments expressed. As Payne regrettably acknowledged, there is increasingly undue emphasis being placed on A level scores, in spite of the reservations. Better the devil you know, and a pragmatic approach is adopted because it is a convenient threshold for matching entry numbers with targets, and some measure of academic potential is better than none.

Copping drew attention to a high substitutability between qualifications and experience, especially in the technology/technician area. Whether this is from choice or necessity is not certain. In the case of information technology the suggested creation of a special agency involving Plessey, GEC, Standard Telephones and Austin-Rover to prevent and cure shortages of technological skills (John Turney, THE, July 20) implies that substitutability may be camouflaging a serious problem.

The Butcher report projected a demand for IT graduates growing by between 50 per cent and 60 per cent by 1989; and by implication entry numbers being correspondingly increased in 1985 and 1986. "Home" student entry numbers have declined since 1981 (vide our Table 1). Given additional resources, the universities could doubtless cope with 3,500 "home" entrants in electrical engineering - but where will they come from?

If the popularity of the subject remains such that it attracts 6.2 home candidates/1,000 18-year-olds, about 60 per cent of candidates would have to be admitted and their average A level score in the universities would drop from the 1983 level of 11.6 to about 8.5 by 1985. Your correspondent argues that this may not be critical but it is some measure of the change required. There would be a concomitant drop in candidate numbers seeking entry to similar courses outside the universities.

The suggested development of a new institution to take 1,000 students to relieve the shortfall may only have the effect of diverting students from elsewhere in the system. The provision of resources does not automatically ensure extra students - as witnessed in empty science and technology places in higher education. The message is that unless the pool of candidates can be increased so that the 6.2 candidates/1,000 18-year-olds grows to about 9.3/1,000 (vide our Figure A for a perspective), the provision of resources in unlikely to produce the numbers of graduates required.

The twist in the tale is that if electrical engineering attracts 9.3 candidates/1,000, they may well have been diverted from mathematics, physics and computer science and the critical shortage merely relocated.

Women Into Science and Engineering year could be particularly relevant in producing an absolute increase in candidacy as was pointed out by Payne, but a fundamental shift in social rewards for participation in higher education is equally urgently needed. The basic point remains that the long lead times induce a hysteresis effect between demand and supply and in 1989 we could well be rehearsing the same arguments.

Yours sincerely,
BRYAN J. R. TAYLOR,
Planning officer, Bath University.

ELIZABETH A. TAYLOR,
Principal, AAT Consultants.

Letters for publication should arrive by Tuesday morning. They should be short, precise and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

Colleges' fate still undecided

by Karen Gold

The National Advisory Body board this week put off a decision on two threatened colleges, by ordering a review of Falmouth School of Art and passing on the decision of De La Salle college to the NAB committee.

The board of De La Salle until the 1980s planning exercise, because the college has just begun merger talks with Salford College of Technology. But it decided instead to pass on the decision on the Roman Catholic college's future - uncertain since approval for its initial teacher education withdrawal had made it a political decision. The committee will discuss it on October 22.

The board accepted a recommendation of the NAB art and design working group on Falmouth, that it should continue to be approved for this year, but that all Cornwall art and design provision should be reviewed for 1987/88. Had Falmouth lost approval of its BA fine art degree, it would have had to close.

The board also accepted recommendations by the art and design group to withdraw approval from five courses: at Hounslow College, Amersham College, Doncaster Institute of Higher Education, Cambridgeshire College of Arts and Technology, and Great Yarmouth College.

It agreed the transfer of a number of courses, and future reviews after validation by the Council for National Academic Awards of several, including the BA fine art at Liverpool Polytechnic, and a DipHE at Darlington College of Arts. The decisions go to the NAB committee, which has already agreed and passed on all the board's decisions on diversified teacher training colleges except that of De La Salle.

Mr John Bevan, secretary of the NAB, last week told a delegation led by Mr Brian Sedgmore, Labour MP for Hackney South and Shoreditch, that there was no policy for a token closure of a free-standing art college.

The delegation, from the action committee for free standing art colleges, told Mr Bevan that the consultation procedures over Falmouth and Liverpool, and mergers at Maidstone and Canterbury had been an insult.

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Scientists seek space cash

by Jon Turney
Science Correspondent

Britain will miss out on a new generation of European space science missions unless the Science and Engineering Research Council can find a way of increasing its space budget.

A strategy meeting of the council's astronomy, space and radio board last week faced up to a big gap between the money available to keep up Britain's contributions to the Paris-based European Space Agency and the agency's likely demands. Ironically, an internal council review of space science to be considered next month will suggest the SERC makes more use of the ESA.

ESA plans now maturing within the agency may put the cost of membership beyond Britain's reach.

European scientists reviewing ESA's plans until the end of the century have recommended a two-thirds increase in the agency's spending on space science to permit a shift to more expensive space observatories. The four key projects in the proposed new

programme would each be double the cost of a normal satellite mission. They include: a solar observation mission; a project to collect and return samples from an asteroid or a comet; a new X-ray observatory and a new sub-millimetre orbital telescope.

Going ahead with all four, and maintaining the other elements of the ESA's science programme, would mean an increase in member countries' contributions of 7 per cent a year until 1990. The SERC board's calculations suggest the most the British can manage is an extra 1 or 2 per cent a year.

Britain has already vetoed increases in the agency's mandatory science budget in the face of support for expansion from other member countries.

However, the review takes place against a background of renewed industrial interest in space, and European-wide discussions on participation in the planned American space station, 240 to 160 over the next five years. Some university scientists are hopeful that pressure to increase Government support for space more generally will free some extra cash for scientific

missions. This will depend on the SERC forming new alliances with industry, the Department of Trade and Industry and probably, the Ministry of Defence. A few scientists have been invited to a discussion meeting on the subject next week with the new information technology minister, Mr Geoffrey Pattie.

A second critical issue raised by the SERC space science review group, chaired by Professor Mark Richmond, vice-chancellor of Manchester University, is whether single university groups can manage increasingly complex space missions properly. The review group's report will suggest more projects should be handed centrally by the SERC, probably from the Rutherford Appleton laboratory in Oxfordshire.

This would imply a halt to the current decline in staff the laboratory's space division. The establishment for space science is planned to drop from 240 to 160 over the next five years, partly due to some large projects being completed and partly from budget cuts by the astronomy board.

Individual membership move by NUS

Student leaders aim to abolish individual membership of the National Union of Students during a rapid revision of the organization's constitution.

Refusing to attribute blame to any one party, the report nevertheless says the mismatch of expectations stems from a failure to provide courses which meet industrial needs, with too much emphasis on executive development and "loose" admissions criteria. For graduates, high financial rewards seem to be their prior concern, while company recruitment policies have not changed and here is no consensus about the value of MBA degree.

Master of Business? The MBA and British Industry by Kate Asher, published by Harbridge House, 3, Hanover Square, London: £18.50.

The NUS has about 300 individual members, most of whom are concentrated in the Scottish universities disaffiliated from NUS. The main concern of the working group is what should happen to students in this category, and the future status of the NUS societies which have been established at many of the disaffiliated universities.

Leading members of the National Organization of Labour Students on the NUS executive support the move, mainly because individual membership has been a valuable weapon of the right in disaffiliation/realignment battles. This was highlighted last year by the then chairperson of NUS Scotland, Mr Bob McLean, in his reports on realignment attempts at two Scottish universities.

Opponents of NUS were able to argue that if the organization provided the benefits its supporters claimed, individuals were free to join without the entire student body affiliating.

If adopted, the proposal would effectively spike the guns of the new campaign by the Federation of Conservative Students for voluntary membership of NUS.

Conservatives who support the principle of NUS while dissenting from some of its actions, also back the abolition proposal because they see it as a step away from the NUS image as a 1.2 million member quasi-union to a national federation of student unions with a functional rather than political role.

Business schools criticized

by Owen Surridge

Financial success has led British business schools into complacency which blinds them to their failure to meet the needs either of the graduates or British industry.

The consequent hardening of industry's prejudice against graduates of business schools suggests that the Master of Business Administration degrees will increasingly be seen as training grounds for intending employers of American companies.

These conclusions are spelled out in a lengthy report just produced by Harbridge House, an American management consultancy. The work stems from a survey of the schools, their graduates and British industry and examines the attitudes and behaviour of each.

Refusing to attribute blame to any one party, the report nevertheless says the mismatch of expectations stems from a failure to provide courses which meet industrial needs, with too much emphasis on executive development and "loose" admissions criteria. For graduates, high financial rewards seem to be their prior concern, while company recruitment policies have not changed and here is no consensus about the value of MBA degree.

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Opponents of NUS were able to argue that if the organization provided the benefits its supporters claimed, individuals were free to join without the entire student body affiliating.

If adopted, the proposal would effectively spike the guns of the new campaign by the Federation of Conservative Students for voluntary membership of NUS.

Conservatives who support the principle of NUS while dissenting from some of its actions, also back the abolition proposal because they see it as a step away from the NUS image as a 1.2 million member quasi-union to a national federation of student unions with a functional rather than political role.

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Peace studies

Sir, - In your eagerness to refute the criticisms of peace studies teaching made by Dr Roger Scruton and others, you write (editorial "War and Peace", THE, September 21): "The issue is one of the balance of academic effort. There is one department of peace studies in a British university and a scattering of smaller units and individuals with similar preoccupations. On the other side, a considerable proportion of our national research and development, high by international standards, is devoted to war."

This is just the sort of misleading formulation which leads many in the academic community to question the present attempts to spread the teaching of "peace studies" in the education system as a whole. There is indeed considerable research into defence-related matters in British universities. Such research is not, however, "devoted to war" but to the preservation of peace through effective deterrence. To dismiss the contribution which such work has made to keeping the peace of Europe over the last 40 years is to reveal a lamentable lack of historical sense and political judgment.

As for your rejection of the charge that peace studies, as presently taught, is inherently biased, it does not seem to me that Dr Scruton's case rests on the view that the majority of "peace studies" teachers lack academic integrity, or on the "plainly banal"

charge "that people in peace studies are interested in peace in the same way that engineers are interested in bridges". What is at issue is the lack of balance in the syllabuses and reading lists utilized in many "peace studies" courses - a state of affairs well documented in the recent pamphlet by Dr Scruton, Lady Cox and Dr Marks.

The effect of such imbalance is to produce just the sort of false opposition between the preservation of peace and the deterrence of aggression to which your editorial seems by implication to subscribe.

Yours faithfully,
DAVID J. LEVY
Secretary,
Academic Council for Peace and Freedom.

Sir, - Your report on the Bradford peace studies conference (THE, September 21) contains two serious errors which it is difficult to see as unforgotten. The professor of politics at Nottingham University is Dennis Kavanagh and not as you name him. There is indeed no such person as Donald Regan currently working in the department of politics, though it does contain among its teaching staff a David Regan. He is employed as Francis Hill professor of local government.

Yours sincerely,
PETER MORRIS,
1 Globe Street,
Beeston, Nottingham.

HMI reports

Sir, - I respectfully suggest that the time has come for you to review the way in which THE HMI makes use of published Her Majesty's Inspectorate reports on institutions. Now readers are now regularly puzzled by the sequence which usually goes as follows. Banner headlines: "HMIs find nautical studies at Scarborough Polytechnic to be sinking fast." Three weeks later: a long letter from either the course tutor or the director pointing to all those sections of the course which the inspectors had found to be " buoyant and sea-worthy". The result is always more heat than light.

Your astonishingly partial digest of

the report on computing at Oxford Polytechnic (THE, September 21) threatens another similar round. At the very least, it would have been of interest to your readers to have the polytechnic's views on developments since the period in question (now 15 months ago), and some sort of comparative assessment of the position in other institutions. Incidentally, my colleagues and I have searched the report and can find nowhere the characterization "badly run" which you chose to headline in quotation marks.

Yours faithfully,
DAVID WATSON,
Dean, Modular Course,
Oxford Polytechnic.

Poly strategy

Sir, - I hope that you will allow me to correct the false impression created by your front page report (THE, September 21) on current plans at Birmingham Polytechnic.

A planning exercise initiated in December, 1982 - nine months ahead of the Council for National Academic Awards institutional review report - produced a framework of strategic policies which were approved with enthusiasm by both the academic board and the governing body in June/July, 1984. Those policies were placed before the local education authority's further education subcommittee on September 5, 1984. Support for these policies from the Birmingham i.e.a. is essential if the polytechnic is to avoid stagnation and a very uncertain future.

To fund new educational developments and to solve long standing resource problems, a resource strategy has been proposed. In the absence of additional monies this strategy is based upon the reallocation of existing revenue. The CNA report simply confirmed that such a redistribution would be feasible.

The CNA report was, therefore, helpful, but it is wholly misleading to state that "its conclusions form the basis of the polytechnic's internal plan", nor is the polytechnic reacting to "pressure from the council". These strategies - including the resource strategy - were identified as a result of 18 months of intensive planning activity involving participation by a large number of academic, administrative and technician staff.

The resource strategy does call for a reduction of 432 teaching posts (107

South Africa

Sir, - I refer to Craig Charney's "Dilemma of the homelands" (THE, September 7). While I cannot comment on the causes of the trouble in the independent state of Transkei, indeed it would be improper of me to do so, there are some statements about university education in South Africa which are at best uninformed, if not positively malicious.

"Most black universities in South Africa," he asserts in his opening sentence, "have earned reputations for repressive mediocrity." Who holds these views? How qualified are they to pass judgments? What standard of mediocrity is being referred to? And in what way is this alleged mediocrity oppressive?

As to who holds the views and their qualifications, I can only say I have heard such views before, but almost inevitably from the uninformed. As one who has been intimately concerned with the development of higher education for the 20-year period from 1962 to 1981 as curriculum consultant and external examiner, among all population groups, I would offer the following information.

All universities have a system of external examining of all final year and postgraduate papers to ensure equality of standards. Not surprisingly new universities, both black and white, wishing to establish a reputation, tend to turn to the older (mainly white) universities, and even to British universities, as a source for senior academic external examiners. If Mr Charney is questioning their integrity, or indeed my own, he should have very sure grounds for doing so.

It is he suggesting that blacks are inherently mediocre students he will find little solid research support for his view, and if he is alleging that black university staff is inherently mediocre, he should certainly provide evidence for so serious an allegation. In fact, the basing of an article on so seriously contentious an opening statement is more than just malicious, it is irresponsible, and can



South African youth

do the profession of journalism no good.

If Mr Charney is saying that the average quality of student emerging from a black university tends to be less gifted than his white counterpart, he may have a statistical point, but then a person with a degree must be seen, in terms of the whole population, as belonging to a statistically small elite. Mediocrity in these terms is extremely relative.

That improvements need to be made, and that educationists daily address themselves to this problem is undeniable. If, however, Mr Charney believes that instant educational excellence is possible, he is as ignorant as he is uninformed.

J. M. LEIGHTON
Counsellor for Cultural Affairs,
South African Embassy, London WC2.

together with a voluntary redundancy scheme, with up to five years' enhancement, a redundancy lump sum, and up to 12 weeks salary in lieu of notice. Teachers over 50 years of age would be allowed to choose whichever of these schemes best suited them and all volunteers would be allowed to go.

Actual dates of retirement or redundancy would be negotiated in advance of the planning period, initially set at three years from August 1985 to August 1987. These schemes were thought to be sufficiently attractive to encourage a large number of volunteers from the total number of 230 (and not 180 as quoted in your report) teachers who would be eligible by August 1987.

Yours faithfully,
W. K. ALLAN,
Deputy director (academic and resource planning),
City of Birmingham Polytechnic.



Brighton Polytechnic staff and students, with a little help from a BBC Radio Sussex producer, prepare to go on the air with one of five regular programmes they provide for the station, including a computer programme, a "Business for Industry" programme geared toward local industrialists, and a cinema preview for a young people's show. In the studio (clockwise from left) are: Dr John Bessant from the polytechnic department of business management at the studio desk; Gareth Rogers, BBC Radio Sussex education producer; librarianship student Andy Towers; Dr Martin White, department of education studies, and librarianship student Alan Goodman.

Strike hits polyversity

The United Kingdom's first polyversity faces industrial action on the day it formally opens its doors.

On Monday, the inaugural senate and council meetings of the University of Ulster, formed from a merger between the New University of Ulster at Coleraine and the Ulster Polytechnic at Jordanstown, will be held by striking members of the Association of Scientific, Technical and Managerial Staffs.

Technical and clerical staff who formerly worked at the polytechnic have been embroiled in a long-running dispute with the new institution's management over the terms on which they transfer to the university.

ASTMS, which has called all its 400 members at the university out on a one-day strike, is angry that the management has not agreed fully to assimilate technical and clerical support staff on to university scales.

It says that all academic and senior administrative staff from the former polytechnic have been transferred on a grade by grade basis.

ASTMS divisional officer, Mr Roger Leary, said this week: "Our members feel they have had a raw deal from the university management, and are being treated as second class citizens. We are not prepared to tolerate such treatment."

In elections for non-professional academic staff to council, Mrs Heather Egan, chairman of the Association of Polytechnic Teachers at the polytechnic and a former national chairman of APT, topped the poll. Others elected were Mr Tony Moon, a member of the National Association of Teachers in Further and Higher Education, Dr Chris Nevill, the APT's treasurer, and Dr Chris Kitter, chairman of the APT Association of University Teachers.

Union challenged over action plan compromise

The further education executive of the Educational Institute of Scotland is being challenged by its membership over a compromise on the government's 16 to 18 action plan.

The EIS further education section had initially threatened a boycott of work on the action plan in protest at the government's intention the offer the scheme to private training agencies.

However, after protracted discussions, the Scottish Business and Technical Education Councils, which validate the scheme, proposed a compromise postponing privatization of courses for two years.

The executive last week began balloting members, recommending acceptance, but lecturers are now mounting a campaign to have the executive's decision overturned. A petition is circulating seeking a special delegates' meeting, and it seems certain to attract the 600 signatures necessary to requisition an emergency conference.

One of the staff responsible for setting up the petition is Mr Vince Mills, chairman of the Coarbridge College EIS branch, and a former further education executive member.

He said the executive's compromise was an insufficient guarantee, which would not stop privatization. He added that the executive had lost touch with the membership.

The executive voted for agreement by 13 votes to three, and the ballot would not stop privatization. He added that the executive had lost touch with the membership.

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High Court hears polytechnic case

continued from front page

The lecturers in the case are appealing for financial support to cover the £30,000 legal costs which have arisen. So far they have raised £4,000. The lecturers involved are: Dr Paul Corrigan, Mr Noel Parry, Mr Kevin Fitzgerald, Ms Claire Goymer, Dr Trevor Joscelyne, Dr Denis Jude, Ms Margaret Metcalf, Ms Sheila Maykett, Dr Mike Newman, Dr Rodney Pickering, Dr Esther Saraga, Mr Ron Swithbank, and Ms Susan Wright.

Mr Justice Kennedy suggested to both sides that the lecturers might disclose the names to their own solicitors, who would keep them in confidence. They would only be disclosed by the solicitors if the students in the photographs again got into trouble

over Mr Harrington.

The compromise solution was not pursued during the hearing, which was in chambers. The judge refused two applications from the lecturers' counsel for it to be held in public. He also refused an application from them for Mr Harrington to be cross-examined in court on his affidavit.

Mr John Derby QC, counsel for Mr Harrington, said the lecturers would not be cross-examined once they had looked at the photographs and would only be required to identify students in affidavits.

If the court upholds the order and lecturers refuse to look at the photographs, then it is up to Mr Harrington to bring proceedings for contempt of court against them.

Judgment was reserved.

Courses

Postgraduate Certificate in Education: MUSIC (CNA)

DON'S DIARY

MONDAY

I am filled with an overwhelming boredom. I write to 12 colleagues asking for a short CV, course outline, and timetable information for our new research methods course. By Friday, six will deny all knowledge of the circular, five will "have it in hand", and our resident bandit will have no intention of doing it until I have asked him another five times - can this be the same man who docks marks when undergraduate scripts are late?

In polite desperation I attempt to sort through mail for last fortnight accumulated while "on holiday" (in fact, my "holiday" consisted of painting the house, while my academic neighbour swans off to observe acupuncture operations in China). With-out lunch, I am miserably practicing with my 3 iron on 3rd XV rugby pitch - am chased off by red-necked rugby coach.

Back to my pigeonhole again, a folder appears from my one-fifth of a share secretary with typing in it. Daer Barbara has been using the word wressor again. The trade union representative says it is bad for the eyesight.

TUESDAY

Unshowered and unshaven my wife drives me to work as I have missed the train. I settle down to respond to latest Economic and Social Research Council research initiative. Become filled with overwhelming boredom. Instead spend half the day writing report for DHSS explaining why an insufficient number of people carry kidney donor cards. Generally, potential "donor card carriers" blame inertia, apathy and lack of information. My acutely tuned brain extrapolates that the underlying cause may be an overwhelming sense of boredom. Eat sandwich and practise 3 iron on 3rd XV rugby pitch. Golf coach tells me left arm isn't stiff. Fluffy left arm, miss ball completely. Funny how there is always a coach around when you don't need one.

WEDNESDAY

Receive two letters from journal editors - first letter asks for major revision of first class paper, second letter accepts second class paper for publication unamended. Make mental note not to try harder. Consider practice with 3 iron - decide I am depressed enough already.

Mark re-sit examinations. At least everyone turned up. One or two students show vast improvement. One or two others tell whether we have guts to fall them.

I approach the guardian of purse strings in good time. Next Friday I want to visit my research colleagues at Exter University, I whimper. I will be taking my car so my family can visit the parents. Of course I will only claim the train fare not the mileage.

The accountant of Gormenghast looks at me like private supermarket detective eyeing a prospective shop lifter. How, my interrogator continues, is this to be accounted for? Without a travel warrant what proof is there that the journey has been taken? I offer to bring back clotted cream: this falls and spills on stony ground. Eventually I get the OK for my "outing" as it is described. I am left with a sense of guilt for a crime uncommitted.

THURSDAY

I tiptoe to the computer centre. At 20 yards you can tell whether a run has worked or not - somewhere in my past life I've learnt that an apprehensive approach is more likely to result in a tabular version of War and Peace

than a damning few slivers of print-out. Success! Then spend most of the day trying to work out what it means. Think about whether it is possible for a computer (theoretically of course) to work out what the print-out means for me. Flip through books on artificial intelligence, meanwhile cross-tabulations reproduce themselves on my desk.

Books keep rolling in for review. Like pop groups, there seem to be far too many of them for my liking. They are either incomprehensible or banal with little interest. Sometimes the mathematics is so difficult it takes me all day to realize the essence of the volume is of little or no interest to anyone. At the other extreme a recent tome went into considerable detail about the schooling and personality of Adam Smith, Malthus and Ricardo, even what they had for breakfast, but to what they actually had to say about economics, the reader is likely to be left none the wiser.

Our leaders in their wisdom are installing a lift. The building work has been timed perfectly to coincide with the first week of term. Walking up these stairs is the only physical exercise some of our academic staff get; watch this space for a jump in the incidence of coronary heart disease. Is this all part of the cusp?

FRIDAY

Against all the odds, eight new full-time postgraduates have already arrived, more surprising still they all have grants. The wrangle for space begins. "Postgraduates are a good thing of course, but do they really need a desk each," I hear bemused. There is always someone around who can tell you how they wrote and published a PhD in three years, while enduring full-time, raising three children and living in a garret. Corporal punishment did them no harm, and two good cinema seats and a romantic fish and chips supper still left them with change from a 10 bob note. Presumably the poor completion record of social science postgraduates is due to a general lack of moral fibre. If I had my time over would I do it again? This time around there would be no academic career at the end of it and the suspiciousness that many British employers treat intellectuals even more pronounced.

Decide to chase up people about the circular I placed in their pigeon holes on Monday. Estimates are way out: of the 12, 10 have a vague recollection of receiving it, and this for them apparently suffices as an explanation. The bandit is too busy to talk and rushes downstairs to push back the frontiers of knowledge and escape the shackles of administration. Filled with an overwhelming sense of boredom. Plan revisions of two articles returned by journal editors, wonder who reviewers were, plan appropriate punishment, retributive bubble bursts by remembering nasty reviews written by yours truly. All's fair in war and reviewing. Still time before term starts in earnest for a round of golf. Feeling of boredom immediately dissipates yet remember all the work I have to do on fifth fairway, worry about chances of senior lectureship on ninth green. Gingerly draw 3 iron from bag, the long fourteenth. Take large drive 30 yards. Blame it on Margaret Thatcher and the unacceptably high levels of unemployment.

SATURDAY

I promise myself, my wife and our smiling four-month-old baby this would not happen: The dedications in the front of books thanking the support and enduring patience of wives and husbands are no empty acknowledgment in my case. Being hyped-up has become a habit, half a day a week for a round of golf has been a saviour (even with my 3 iron) but I still have to train myself to enjoy weekend in the garden or pottering about the house. So baby Georgina, Roland Rat and I share at the blank pages in my study together, dreaming.

Alan Lewis

The author is lecturer in research methods in the school of humanities and social sciences, University of Bath.

Deep-sea drilling threatened

by Jon Turney
Science Correspondent

British geologists face exclusion from the Ocean Drilling Program, the international project for deep-sea drilling, unless an eleventh hour deal is struck between the Natural Environment Research Council, the Department of Energy and the oil companies.

All three have an interest in the results of boreholes sunk into the seabed deep below the ocean, but they cannot agree on who should pay Britain's subscription to the American-led programme.

The Ocean Drilling Program is the successor to the international Deep Sea Drilling Project, mounted from the research ship Glomar Challenger. Geologists use the deep-sea cores to study the earth's crust and ocean sediments. The programme used to

cost foreign subscribers \$1m a year, with Britain's contribution coming from the NERC and the Department of Energy.

However, the department has so far declined to contribute to the new phase of the project, when use of a new vessel will increase the cost to \$2.5m a year. The NERC has so far not found anyone else to make up the shortfall in funding.

Britain paid an interim \$200,000 subscription to secure participation in the planning stage but this expires at the end of this week. France and Germany have already agreed to participate at the new rates, and Canada and Japan are likely to finalize subscriptions soon. But the final deadline for national decisions is the end of the year, so British discussions on funding must be brought to a conclusion in the next few weeks.

NERC sources are still optimistic that the extra money can be found, but they face opposed stances from Government and industry. The Department of Energy has taken the view that the programme has scientific merit but no direct relevance to energy exploration. The oil companies are keen to secure British participation in the new phase of drilling, but argue that they should not have to bear the cost on top of their tax obligations.

The research council organized a meeting between the companies and civil servants earlier this month, but no agreement has yet been reached on who should pay what portion of the money. Meanwhile, the fall in the value of the pound against the dollar is raising the effective cost of the \$2.5m subscription, so the NERC's prospective partners are likely to be asked for a still larger contribution.

Fulbright makes bid to increase sponsorship

The Fulbright Commission, which has sponsored Anglo-American academic exchanges for more than 30 years is bidding to raise its public profile by staging a series of transatlantic colloquia.

The first, on ethics and international affairs involving some 20 North American scholars and a similar number of British academics, is being held this weekend at St Andrews University. The vice-chancellor, Dr Steven Watson, is a former Fulbright fellow. The colloquium will discuss political realism and moral theory, sovereignty and the ethics of intervention, and the ethics of nuclear deterrence among other topics. It will also mark the opening of the university's new centre for philosophy and public affairs.

The commission has put up £5,000 for the event and plans to sponsor further discussions in the future. It also plans to raise extra funds from industrial and professional sources to increase the number of academics it

sponsors annually.

At present, the commission receives two-thirds of its budget from the US government and one third from the British Government. During the last 10 years, it has sponsored around the same number of graduates.

This year, 26 UK graduates and 38 UK research fellows are being sponsored, with 12 US lecturers and 27 US graduates coming to Britain. In 1972/3, there were 40 from the US and 65 from the UK.

Applications, restricted to those with a 2.1 or first class degree, remain buoyant, but Captain John Franklin, a former dean at the Royal Naval Engineering College in Plymouth, who takes over next month as director, is keen to increase the funding base.

Some 10,000 people, including 6,000 Britons, have been sponsored in all by the commission, originally founded after Senator William Fulbright persuaded the US legislature to use war surplus funds for education

Meeting may have sparked talks

by Olga Wojtas
Scottish Correspondent

US moves this week to begin negotiations with the Soviet Union may have been sparked off by the "Edinburgh Conversations" held in Moscow the previous week.

Professor John Erickson, head of defence studies at Edinburgh University, who was instrumental in setting up the informal but top level discussions four years ago, said he had gone to Moscow "really very depressed, because I couldn't see any way out of the logjam. But if there was any notion that there is a complete stalemate, I think these conversations tended to dispel it."

Professor Erickson said it would be "intrusive, impertinent and improbable" to say that the American initiative was a result of the conversations. But he added it was a rather curious coincidence, coming so soon after the general recognition by the British American and Soviet participants that it was vital to find new forms of negotiating machinery. "These ideas travel fast," he said.

Participants at the conversations, which were chaired jointly by Dr John Burnett, principal of Edinburgh University, and Dr G. Yanaev, deputy chairman of the presidium of the Union of Soviet Friendship Society, included Mr Max Kampelmann, a close adviser of President Reagan, Major General K. Mikhailov of the Soviet general staff, and Admiral Sir James Eberle from Britain, the first senior NATO commander ever to visit Moscow.

Professor Erickson said all sides realized some form of restraint had to be developed, with the first restraint on "rhetoric, abuse and abrasive language."

Both sides had to begin to think of how to put their points in language which did not denigrate the other side or destroy the basis for agreement. The question "why don't you trust us?" had met the answer "because we can't rely on your statement."

Since their inception, the talks have centred on the theme of survival in the nuclear age. Professor Erickson said that for the first time extremely distinguished scientists had been able to put before military commanders the scientific implications and consequences of nuclear war, the so-called nuclear winter.

Professor Aubrey Manning of Edinburgh's zoology department, who had also attended the conversations, said there was no justification for saying the Russian people were being kept in the dark about the effects of nuclear war.



OU appoints its first deputy v-c

The Open University has a new deputy vice-chancellor, Professor Norman Gower (above), who was one of the first lecturers appointed to the OU, takes up his new job this month.

He becomes the OU's first deputy vice-chancellor and takes over responsibility for future planning and the use and development of new technology. He was appointed to the university in 1969, and became a senior lecturer in 1971. His main interests have been in the development and implementation of new approaches to mathematics teaching.

Professor Gower was prov-vice-chancellor for planning at the OU from 1977 to 1980.

Recommended new pay scales for university lecturers			
	April 1983	April 1984	
Assistant lecturer	£ 7,190-14,125	£ 7,521-14,925	
Senior lecturer/reader	13,515-16,925	14,137-17,703	
Professor - minimum	17,275	18,069	
- average	20,300	21,234	

These increases were recommended by the independent chairman of committee A in the absence of a negotiated settlement.

Business students join loans scheme

by Paul Flather

A new prototype mixed loans and grants scheme of the kind Government ministers have approved in recent years has been introduced for postgraduate students formally enrolling at the London and Manchester Business Schools this week.

New students have been given discretionary grants assessed according to

their needs and their assessed academic grades, which they can top up with training loans from the big four clearing banks.

At the London Business School about 85 awards have been made this year - about half worth £3,000, about a quarter worth £4,500, and the rest worth £1,500. No one was given the maximum award of £6,000 reserved for those with large family commitments.

Students can also receive £750, or no award at all.

This contrasts strongly with the system in previous years, administered through the Department of Education and Science. About two thirds of new students would receive full postgraduate grants and a third would receive nothing at all, leading to rivalry and jealousy. It also put off some good students because they

failed to receive any grant.

The new system was first floated more than two years ago by the two business schools, which had to persuade Whitehall to pass over final controls on the awarding of grants to the individual institutions. This was finally agreed earlier this year but details have only just been finalized.

A total of £417,000 has been handed over to the two business schools by the Economic and Social Research Council, which took over responsibility for the Master in Business Administration (MBA) from the DES, to pass on in discretionary grants.

The schools assess students' needs and calculate their academic grades using the standard American management grading test, interview and work record. The LBS, with six applicants per place, reckons to have had the best results for any European business school in its grading test this year.

Professor Peter Moore, principal of the school, said the new scheme had many benefits. It encouraged more potential applicants and spread the total sum of grant money more evenly and fairly.

"With money so tight at the moment it is now possible for us to spread the awards more widely," he said. "It is also a test of motivation for our students if they have to take out their loans. People ought to be encouraged to take steps to further themselves."

He said he had detected a widespread feeling among young people that they at least deserved their fees paid for while they sacrificed regular income to take the MBA, whose fees currently cost about £1,500 a year. He felt the scheme could well be extended to other master's courses.

All the big four banks offer loan schemes for postgraduates taking vocational training schemes. A typical scheme could involve a loan of two years' current salary paid over four years, and then rise to well above the going rate, when loan repayment would also start. By then students would be expected to have landed a lucrative new post.

news in brief

Interim head for NERC

The Department of Education and Science has confirmed that Mr Hugh Fish is to become interim chairman of the National Environment Research Council, on the departure of Sir Hermann Bondi at the end of this week. Mr Fish, until recently chief executive of the Thames Water Authority, will work as chairman for three days a week until October 1985, by which time the DES hopes to have found a chairman prepared to take the job full-time for the normal five-year term.

The DES has also announced four new members of the NERC: Dr Keith Browning, head of the Meteorological Office Radar Research Laboratory; Professor Geoffrey Eglinton of Bristol University; Dr Michael Ridd, general manager of exploration for British; and Professor Roger Whittenbury of Warwick University.

Technology boost

Lothian Regional Council is to award £75,000 annually for five years to advanced technology at Edinburgh University. One sum of £35,000 will support the microelectronics professional unit and £40,000 will go to the new Artificial Intelligence Applications Institute, which will work alongside the university's department of artificial intelligence, the only British university department of its type.

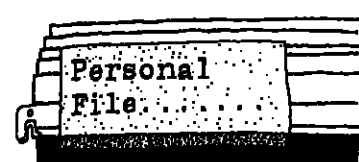
Dental surgery

Edinburgh University dental school should not be closed, Lothian Health Board has decided. This was one option put forward by the University Grants Committee, but the board has recommended the most favourable proposal to the Scottish Home and Health Department, namely a new building for an undergraduate intake reduced by a third, with an increase in postgraduate courses.

Correction

The headline which appeared on a report of the HMI report on Oxford Polytechnic's computing centre in last week's *TTES* was inaccurate. This suggested that the inspectors had described the centre as badly run, when in fact no such phrase appears in their report. A subsidiary heading also suggested that the inspectors had described it as understaffed, poorly equipped and badly organized; again no such phrase appeared in the HMI report. We apologize for any distress that these inaccurate headlines may have caused.

The high-speed professor



Professor Peter Moore loves to travel - especially on trains. He reckons to have been on many famous ones and is always on the lookout for new rides. This week for example he was flying to Paris to board the high-speed train to Lyons where he will take part in a conference on teacher development in business schools. Others, of course, would fly direct.

Professor Moore is going to Lyons as the principal of Britain's premier management school, the London Business School, having just succeeded Professor James Ball after joining the institution at its birth in 1965 and spending 12 years as deputy principal.

He has helped Jim Ball build up the school's reputation, boosted further in recent years by the close links between it and Mrs Margaret Thatcher's economic thinking. It currently earns £800,000 a year in outside contracts and Professor Moore wants to keep up the school's momentum.

He is by training a statistician. After joining University College, London, as a lecturer in 1951 and



Professor Moore: momentum

spending a year at Princeton, New Jersey, he joined the National Coal Board as an economic adviser before becoming head of statistical services for the Reed Paper Group.

He was lured back to higher education after being asked by Reed's to prepare a report on the Franks' committee proposals to establish new business schools in Britain. He became so interested that to the chagrin of his bosses he quit to join the fledgling London Business School in 1965 as professor of statistics and operation research.

His statistical prowess has been tapped on many occasions over the

Tactics for successful updating

Updating programmes in higher and further education would be boosted if the Government focused financial aid on the most promising institutions at critical points in their development, according to a new report.

Other positive measures to introduce PICKUP, the programme of professional, industrial and commercial updating initiated by the Department of Education and Science, are highlighted by the report.

The most important issue is capturing the interest and enthusiasm of teaching staff in updating programmes, and persuading them to be flexible about approaches and venues - including industrial premises.

But the report, prepared for the DES by a team of educational consultants, is critical of some local education authorities which discourage updating provision by insisting that all proposals must be sanctioned, and refusing institutions the opportunity to retain any surpluses they earn for development purposes.

For PICKUP programmes to succeed, local authorities must be able to act quickly and flexibly in response to institutions. Current political, legal and financial circumstances might inhibit their ability to react, but productive arrangements can be made.

The research team visited 20 institutions to compile their findings. These included four universities, four polytechnics and two institutes of higher education.

PICKUP: Delivery Systems, a Report for the Department of Education and Science, Room 711 DES, Elizabeth House, York Road, London SE1 7PH.

Study in debt

The Economic and Social Research Council has commissioned a review of the international debt problem by Dr Stephen Griffith-Jones, of the Institute of Development Studies at Sussex University, which has been given a £2,750 contract for the work.

Industry link refused extra funds

by Olga Wojtas
Scottish Correspondent

The Scottish Office has welcomed a report on closer links between industry and higher education, while ignoring its pleas for more money.

The report, *Profit Through Partnership*, from the Scottish Council (Development and Industry), an independent organization, recommended more funds from government and financial institutions to help put research findings to practical industrial use.

Mr Allan Stewart, the Scottish Office minister for industry and education, this week told the Scottish Coun-

cil that the government recognized there was still a gap in development funding at the point where research had to be transferred to industry for commercial exploitation.

This could be reduced by involving an industrial partner closely in research, he said, and subsequent development work might attract government funding through the Scottish Development Agency, the Department of Trade and Industry or the British Technology Group.

But Mr Stewart stressed that the government believed further improvement did not depend on funding but on changes in attitudes and behaviour from both industry and education.

Government meets defiance over non-advanced transfer

Urban education authorities and the labour movement are to continue to defy Government attempts to transfer a quarter of non-advanced further education to the Manpower Services Commission.

Labour leaders of the Association of Metropolitan Authorities expect to carry the vast majority of their members with them, representing the largest proportion of NAFF provision, in their strategy of outright refusal to cooperate despite the certainty of financial penalties if they do so.

And the TUC general council, whose three commissioners registered dissent from this week to reaffirm its position, the TUC congress earlier this month welcomed the commission's stand in holding out.

What tipped the balance was a letter to the MSC from Mr Tom King, Secretary of State for Employment, which was interpreted by the commission as a legal directive under the 1973 employment and training act. It wasn't a directive, as the department confirmed this week, but it clearly spelled out the Government's intentions.

Mr King accepted in his letter that some education authorities might boycott the consultations on how the

transfer of resources was to be achieved. "But to the extent that any (parties) do not wish to take advantage of this opportunity for consultation, that is a matter for them and cannot be allowed to lead to this amount of resources being lost to the vocational education field," Mr King warned.

The MSC treated Mr King's letter as an instruction, and agreed to open discussions with individual authorities about proposals for 1985/86, to be drawn up by the end of November.

Mr John Pearson, vice chairman of the AMA's education committee, was critical not only of the local education authority commissioner, Mr Alistair Lawton, and the educational commissioner Mr Wilfred Longden, but the TUC commissioners. "We feel bitterly let down. It is quite clear they were not confronted by a directive but a means by the secretary of state to avoid a directive by a threatening letter."

He was angered by the opportunity of further talks with the AMA. "We would have been prepared to meet them at 24 hours' notice," he said. "The AMA felt that given more time, a compromise solution might have been found. 'Now,' Mr Pearson said, "it is a declaration of war."



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South African universities close

from Carolyn Dempster
JOHANNESBURG

Five universities in South Africa have either been closed or classes suspended following a fresh wave of campus unrest and boycotts involving some 16,000 students.

Worst affected was the University of the Western Cape, which caters solely for coloured students and is situated 25 kilometres out of Cape Town.

Students staged a boycott and march to protest against the inauguration of Prime Minister P. W. Botha as the country's new executive state president in the new parliament. Police took action after boycotting students set up a roadblock outside the campus and began stoning the demonstrators with rubber bullets and teargas.

Later, police against entered the campus in search of boycotting students who had sought sanctuary in the administration block. The following day a crowd of 500 students swarmed into the administration buildings demanding the immediate resignation of the registrar for finance whom they alleged had informed police where the students were hiding.

Outside, another 3,500 students milled around the university's entrance after a meeting at which Dr Allan Boesak, head of the World Alliance of Reformed Churches, condemned the

police action as "absolutely scandalous".

Then 2,000 of the students staged a march in protest over the opening of South Africa's new parliament that degenerated into sporadic stone-throwing. Police arrived, warned students they were holding an illegal gathering, and then fired off birdshot and used rubber bullets and teargas to disperse the protesters.

The boycott of classes continues. The University of the North (Turfloop) in the homeland of Lebowa was closed until Monday and all student meetings banned in the wake of the sporadic boycott action and disturbances of the past month.

At Ford Hare University in the homeland of Ciskei, the boycott over food continues and a strict campus curfew between 9pm and 6am has been imposed. Eight members of the student interim committee were detained for questioning for 12 hours by Ciskei police.

The lecture boycott at the University of Transkei (Unitra) over the detention of 200 male students by Transkei police continues. However, the university authorities and the minister of education in Transkei have resolved to keep the university open until the end of the year. If students did not return to lectures, the campus would be closed, the minister added later.

The University of Zululand (Ngoyi) has suspended all lectures and closed



South African police officers detain suspected looters during disturbances

hostels until October 1 after two dining halls at the university were burned down last month and boycotts continued. Final examinations have been postponed until January 4 next year.

The simmering student unrest and boycott action has coincided with

townships and strike action by black mineworkers on 10 gold mines in the provinces of the Orange Free State and the Transvaal.

The death toll in the unrest in black townships has reached 50, while seven mineworkers were killed and almost 500 injured in the mines' strike action.

Colleges defend humanities

from John Walshe

DUBLIN

The place of the arts in the modern university curriculum was defended by two college presidents last week at a conference on the future and relevance of higher education in Ireland.

Study of the arts and humanities was necessarily, as well as historically central in the university, said Monsignor Michael O'Brien of St Patrick's College, Maynooth.

"Students stubbornly want in for numbers to go on studying them. But they are not popular in many quarters, even within the university they are sometimes associated with an idle dilettantism, and the very notion of liberal education is no longer widely valued, and not even, perhaps, widely understood," he said.

Dr Thomas Murphy, the president of University College, Dublin, stressed the value to the community of the arts degrees but he also spoke of the need for closer association between higher education and industry if industrial development were to reach its full potential. Therein lay the dilemma for the universities, he suggested.

He asked what happened when sufficient money could not be provided for both. "Which gets priority? A chair of Latin versus a chair of statistics, a chair of moral philosophy versus a chair in one of the many branches of computer science, a chair of Italian versus an additional appointment in a careers and appointments office? These are not hypothetical examples, they are realities. All will agree that cuts are necessary, but no one wants them in his department."

Cuts were very much on the minds of the people at the two-day conference, the biggest of its kind ever held. Organized by the Higher Education Authority, it was attended by administrators and academics from virtually all the third-level institutions in the state, representatives from industry, the professions, trade unions and government departments.

Dr W. A. Watts, the provost of Trinity College, Dublin, said it was an error to think that Irish universities had a great deal of fat to shed. Universities within the British system had much better student/staff ratios and were at least twice as well funded per student.

With almost half its population under 25 years of age there would be an increasing demand for third-level education that would continue until the end of the century. Any worthwhile developments in Irish third-level education would require extra funding.

Industrialists at the conference stressed the need for more engineers and the preparation of people with technological, marketing, and entrepreneurial skills. A trade unionist warned that taxpayers would not tolerate further investment in higher education unless it brought its intake of students to include a greater representation from lower income groups.

Socialist pledge on ideology

from Barbara von Ow

MUNICH

Increased cooperation in efforts to counter the "aggressive and adventurous course of imperialism" were at the centre of consultations between higher education ministers from 18 socialist countries in East Berlin earlier this month.

In a joint communiqué issued at the end of the five-day conference, delegates pledged that scientists, graduates and students in their respective countries would do everything in their power to battle growing "counter-revolutionary application against socialism".

In the communiqué, which was published by the official GDR communist party newspaper *Neues Deutschland*, the ministers also called for more coordinated efforts to support lesser developed countries on the basis of "proletarian internationalism" and agreed to spread more "detailed knowledge about the effects of the US arms race", especially in poorer nations.

Emphasis on the third world was also underlined in the participation of Afghanistan, Angola, Yemen, Kampuchea, Mozambique and Nicaragua, who all attended the conference for the first time.

Closing the conference GDR higher education minister Hans-Joachim Böhmke underlined the significance of higher education in furthering political-ideological and economic progress in socialist society. Indeed ideological training came a close second to wider cooperation on the agenda of the conference.

According to Böhmke, ideological training was all the more important as universities of socialist states were facing the double challenge of sharpened international tensions and the growing demands of scientific and technological progress.

In this context, the conference praised the contribution of an expert group on "communist education - Marxist Leninist training", stressing its growing responsibility.

Call for US medical training shake-up

from Peter David

WASHINGTON

Far-reaching changes in American medical education are called for in a report published last week by the association of American Medical Colleges. They include renewed emphasis on general professional education in place of specialized training, less memorization and attention to values and attitudes as well as knowledge.

The report - *Physicians for the Twenty-first century* - is based on a three-year study of American medical schools by a national committee chaired by Dr Steven Muller, president of the Johns Hopkins University in Baltimore. Although it explicitly denies that there is a "crisis" in American medical education, it warns of a continuing erosion of general education for physicians in the face of rapid advances in medical science and the fierce pressure to specialize.

In the first of 27 recommendations for change, the committee calls on medical schools to emphasize students' acquisition of skills, values and attitudes at least as much as the acquisition of knowledge. It says the traditional information-intensive approach to medical education is being made obsolete by rapid advances in biomedical knowledge and technology.

As a result, the report complains, lecturers have neglected teaching the values essential to a helping profession and students are led to think that success depends on "memorizing as much information as possible".

One way to change this, the report says, is to insist that intending doctors complete "broad" bachelor's degrees that cover the social sciences and humanities as well as the natural sciences. The committee blames medical schools for contributing to a



Stephen Muller, committee chairman

"promedical syndrome" in which students take courses in the sciences but avoid advanced studies in the humanities and other non-science fields.

At present, the committee found, college students planning to apply to medical school are expected to take a rigid sequence of required science courses. Many schools also suggest additional courses. Since students typically apply to nine schools, the opportunities for broad study outside science are severely restricted.

The AAMC also wants to see fundamental changes in the way students are taught once they have entered medical school. The committee recommends a major switch to independent learning and a deep cut in the number of lecture hours attended. In many schools, the report says, lecture hours could be cut by from a third to a half. Students should be given enough unscheduled time to set and pursue independent objectives.

Pill research professor in bid to halt inquiry

from Geoff Maslen

MELBOURNE

A world-renowned professor at Deakin University in Australia, who is embroiled in a controversy over the honesty of his published research into oral contraceptives, has appealed to the Queen's representative in Victoria to stop the university holding an inquiry.

Professor Michael Briggs, a World Health Organization consultant and professor of human biology at Deakin University near Melbourne, failed in an application to the Victorian supreme court for an order prohibiting the university inquiry. He has now petitioned the governor of Victoria, Rear Admiral Sir Brian Murray, to grant an interim order preventing the inquiry going ahead.

Deakin University council decided to begin an inquiry after Dr E. J. Rossiter, the chairman of the university's ethics committee, informed Professor Briggs of the council's decision. Briggs, who is a vice-chancellor, said that questions had been raised inside and outside the university about

Professor Briggs' research work. The supreme court was told that the questions concerned the accuracy of research papers written by Professor Briggs on the effects on women of hormonal steroids contained in some contraceptive pills.

The papers examined the relationship between contraceptive steroids and the risk of thrombosis. They related to work carried out by Professor Briggs at the University of Zambia where Briggs was formerly a director of biochemistry, and completed at the Alfred Hospital in Melbourne where he was a director of biochemistry.

Professor Briggs, a professor at Deakin since 1976, published the papers in biochemistry journals in 1980. Last year he was involved in a dispute over findings, published in *The Lancet*, which linked the possibility of cancer to the taking of certain types of contraceptive pill. Briggs was an outspoken critic of the validity of the results, notably those published by Professor M. P. Vessey and others at the Radcliffe Infirmary, Oxford.

Danes cut length of degree

from Donald Fields

COPENHAGEN

Denmark, where students take longer to graduate than almost anywhere else on earth, is taking steps to cut the duration of degree courses.

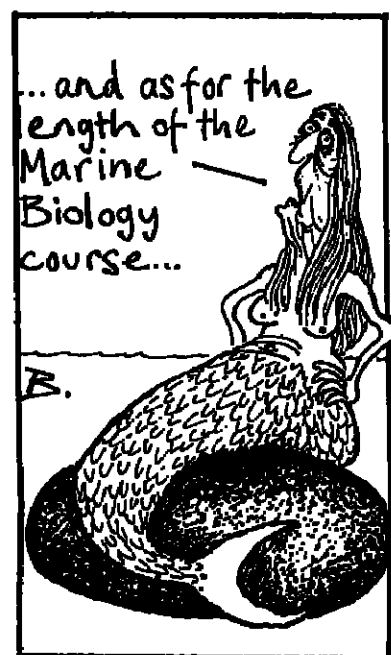
To start with, the ministry of education has agreed with deans of humanities in the country's five universities to reduce the normal time taken over a master's degree from six years to five.

The measure will apply within a career-orientated tertiary education system primarily to students aiming to be gymnasium (senior secondary school) teachers - a dwindling breed on account of social change and fiscal stringency.

The system of reading one main and one secondary subject will make way for a two-year course and three years of advanced instruction. In effect, the academic scope will be broadened, giving successful students job opportunities over a wider range. The blueprint has been forwarded for review by the affected faculties and a graduates' association before it comes into force in the next academic year.

Economic imperatives continue to pervade Danish higher education. The money released by shorter courses will not be lost but transferred to other activities in the humanities. However, the reform is not likely to have a significant impact on drop-out rates.

Furthermore, it will not eliminate an abuse whereby large numbers of "freshers" fail to take up the student places allotted to them, frequently failing to notify their change of mind to



the authorities. This dubious practice has hit the faculty of natural sciences in Copenhagen University, where 40 matriculants were unsuccessful in the scramble for 150 places in biology as a main subject, but 30 of those selected simply stayed away.

What one interested party called an "absurd paradox" is illustrated by a new report covering 14 departments in Danish universities and other centres of further education. Their student intake, this suggests, cannot be expanded for the time being.

Costing \$75,000, the report was commissioned from a private consultant by the ministry of education. Despite its findings, Mr Bertel Haarder, the Liberal minister, appears to be sticking to his view that more students should be squeezed in, if only to combat the high juvenile unemployment rate.

Bureaucratic burden is resented

from Donald Fields

HELSINKI

A pathfinding survey by Finland's central bureau of statistics has provided the nation's university staff with useful ammunition to back their case against an escalating burden of administrative and other work.

On average, the 3,786 respondents to the bureau's questionnaire said that 45 per cent of their working week went on teaching, 38 per cent on research and 17 per cent on other tasks. The last category included red tape inspired by a reform in degree courses and other bureaucratic chores made onerous by a shortage of clerical assistance.

Including vacations, the average working week varied between 47 hours for a professor and 40 hours for a lecturer. On research, which has acquired a special aura in Finland, professors could devote only 33 per cent, and lecturers workingly committed to teaching - only 23 per cent of their time. Assistants managed more than half.

Whereas staff aged under 30 gave almost half their time to research, those over 50 were limited to a mere quarter. The biggest scope for research was in medicine and technology (45 per cent of working time), the smallest was in agriculture, forestry and the humanities (less than a third).

The report shows that Finland has the youngest top university staff in the Nordic region. One in four professors are under 45. But in some faculties, notably natural sciences, promotion prospects are being dented by the large number of highly-qualified people already engaged as assistants.

Not only does competition for senior jobs become more cut-throat, but the way ahead for younger blood is blocked. By contrast, 40 per cent of assistants in technical subjects are still students.

Last spring frustration with limited research and other opportunities followed closely on salaries as a factor that fomented the Finnish professors' strike threat, later withdrawn. That the issue is a constant hot potato is reflected in the high proportion (69 per cent) of those who answered the statistical inquiry.

Meanwhile, university rectors' speeches to mark the start of the academic year have highlighted concern at ministerial intervention in filling vacancies that violates academic authority.

'Free trade in ideas' campaign launched

from Peter David

WASHINGTON

A national campaign to protect a free trade in ideas and uphold the spirit of the first amendment was launched in the United States last week by the American Civil Liberties Union and a coalition of organizations with heavy representation from higher education.

At a conference in Washington leading academics and lawyers said basic freedoms of speech and travel were under new attack by the Reagan administration and threatened to undermine the civil liberties most Americans took for granted.

The campaign is being spearheaded

by a group of prominent liberal lawyers and academics including Floyd Abrams, who defended *The New York Times* in the Pentagon papers case, and Norman Dorsen, Stokes professor of law at New York University.

Although most speakers at the conference emphasized that previous administrations had also been guilty of encroaching on the first amendment, there was general agreement that in several areas President Reagan was presiding over a serious attack on free ideas.

Areas of particular concern were the new controls being placed on the publication of scientific research, the refusal of visas to prominent scholars

and artists from overseas and government obstruction of American artists and scientists who want to express controversial ideas in foreign countries.

Recent actions highlighted by the campaign's organizers included the denial of visas to prominent foreigners like the Nobel laureate Gabriel Garcia Marquez and the commerce department's intervention in scientific conferences to prevent the publication of "sensitive" scientific papers.

A new report from the ACLU describes these and similar actions as a national disgrace and a threat to the United States' traditions of open and robust debate.

Polish academics face further hurdles

The new Polish academic year which begins next month is likely to prove both politically and economically difficult.

A recent cabinet meeting noted that there still existed, especially at some universities, groups of academics with opposition views who were trying to exert "inappropriate influence" on young people.

The next day a meeting of university rectors and Communist Party secretaries stressed that the process of political "normalization" was proceeding much more slowly in the universities than elsewhere. The meeting urged that the principle of

university autonomy guaranteed by the 1982 Higher Education Act should be "realized" in a mature manner - a remark which many academics fear signalled an attempt to water down the 1982 constitution.

The two meetings are also seen as a threat to Solidarity activists who have been allowed to return to their much publicized July amnesty are still at some risk of dismissal. In particular, there remains the problem of Warsaw University, where last spring the ministry of science, higher education and technology annulled the election of the new rector, Dr

Klemens Szaniawski, and suspended the university senate for six months.

The current economic crisis, moreover, has continuing repercussions for higher education. Last week, the Academy of Sciences warned that research activity could soon come to a halt for lack of basic equipment and scientific journals.

A shortfall in book production owing to lack of funds has been exacerbated by an administrative blunder which failed to provide petrol for book delivery vans. Many university bookshops, it is feared, will now be unable to obtain their stocks before term opens.

The commercial success story that makes no profit

by Bill Kirkman

Hongkong has two universities and a polytechnic, but they do not fully satisfy the thirst for further education which is a feature of the place. In particular, they do not fully satisfy the demand for courses leading to the middle management grades in the colony's commercial and financial sectors.

It was the recognition of that demand which led to the creation of the Hang Seng School of Commerce, which opened in October 1980 in Sha Tin with 210 first-year students. The school is a non-profit-making institution, offering a two-year full-time diploma course.

As is the way in Hongkong, its establishment and growth have been rapid. On the site given by the Hongkong government the building, financed mainly by the Hang Seng Bank, went up in record time. The intake grew to 320 in 1981 and in the 1983/84 session to 350.

The entry this month is about 380 - another increase, in spite of the political and economic uncertainties facing Hongkong.

Standards, as well as numbers, are high. The number of applications for the first year was about 6,000 and even after a whittling down process on

paper and by interview, about 700 were taken further along the selection route. In the end, although the school is open to students at the post-Form V stage, about half of the entry possess A levels.

The school's diploma is moderated and assessed by a panel drawn from Hongkong University, the Chinese University of Hongkong, the Hongkong Polytechnic and the Hongkong Technical Teachers' College. From the start the school has sent some of its outstanding graduates on to further study overseas with scholarships - at the City of London Polytechnic and from last year to the University of Bath.

Facilities are excellent. There is a 10-storey teaching and administration block; a large hall, a hostel for over 200 students, a swimming pool and other sporting facilities. Teaching aids include a computer room with over 20 terminals and a library subscriptions to the main business journals.

The school's diploma has been accepted by the Hongkong civil service as equivalent to the Hongkong Polytechnic's diploma in business studies, and it is accepted as providing exemption from stage one of the Institute of Bankers' examinations. There is

obviously, an emphasis on the practical and vocational in the syllabus, with computer studies, accounting, management, English and law as fundamental elements in the programme.

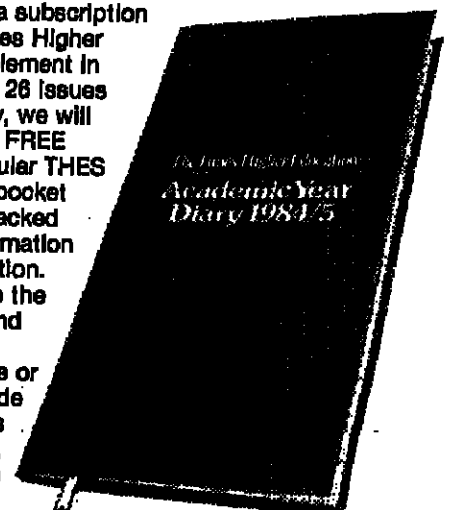
However, Mr N. M. Ho, the president of the school, and former deputy director of education in Hongkong, says teaching policy is based on a judicious and balanced mix of theory and practice. There is increasing attention, as the school develops, to the cultural and social as well as the strictly vocational.

The demand for students is high. So far, the demand from local firms for the graduates of the school indicates that the confidence of those responsible for founding the school was well judged. About 95 per cent of the graduates who have emerged have gone to jobs in the commercial and financial sectors, precisely as it was envisaged.

The Hang Seng School is a lively institution developed, as are many things in Hongkong, by rapid and unprejudiced collaboration between government and commerce in pragmatic response to a perceived need. If needs change, it will doubtless adapt itself. For the moment, the opportunity for high level vocational study remains extremely attractive to young men and women who will still only in their 30s in 1997.

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HEP

The British government, particularly in recent years, has not been well known for recommending or supporting the creation of new organizations at international conferences.

There was all the more surprise, therefore, when Mr Peter Brooke, the minister responsible for science in the Department of Education and Science, proposed to his fellow European research ministers last week that they should support the creation of a new European academy of science.

Initial members of such an academy, said Mr Brooke, might be made up of all Europe's Nobel prizewinners, and these would form the basis for a subsequent expansion in membership to between 2,000 and 3,000 scientists. The organization, he added, would be a "self-regulating body which fulfils the functions of a national academy on a European basis".

The suggestion was made to a meeting in Paris of the ministers responsible for science of the 21 member nations of the Council of Europe, called at the suggestion of the French government to discuss ways of boosting European science by encouraging greater collaboration between research workers in different countries.

There was little immediate public reaction from the other ministers to the British proposal. Many said they found it an interesting idea, but did not want to voice an opinion until they had had time to study more precise details of how such an academy would operate.

British officials, however, say that the response so far - at least from government circles - has been enthusiastic: indeed the very fact they had put forward the proposal to create the new institution in an open forum suggests that soundings taken before the meeting indicated they could expect a reasonable level of support.

A proposal for creating an academy - which Mr Brooke suggested might be "associated with" the name of Leonardo as a way of emphasizing its focus on the achievement of individual scientists rather than research organizations - was drawn up only days before the Paris meeting by DES officials in close collaboration with Dr Robin Nicolson, the chief scientific advisor in the Cabinet office.

They are intended to address many European governments experience as a major dilemma. On the one

The Leonardo project

WORLDWIDE

David Dickson looks at the proposal to set up a European academy of science

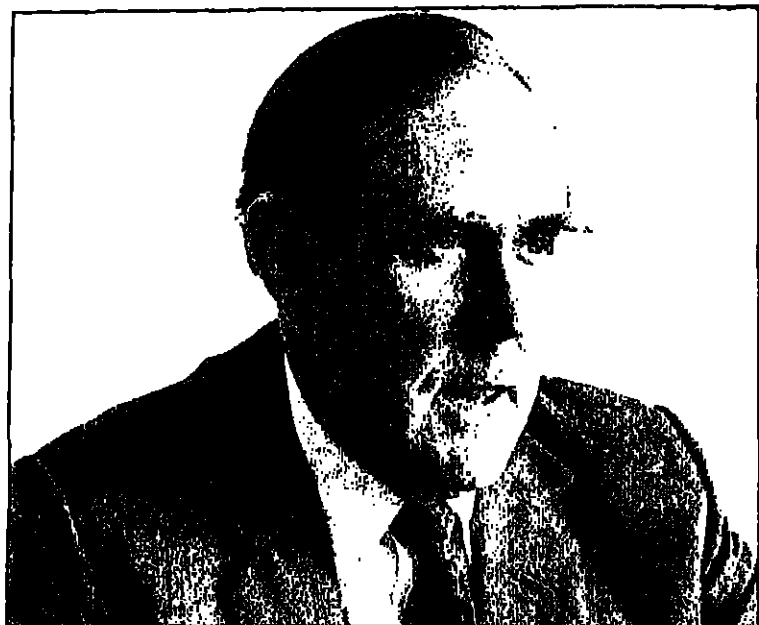
hand, they would like to draw together European research workers into a single scientific community, arguing that only as such can they reach the critical mass necessary to compete successfully with the United States and Japan in rapidly expanding fields of advanced technology.

At the same time, they face a situation which has developed over the past 30 years that, for a variety of reasons, European scientists tend to prefer (and often find it easier) to collaborate with colleagues and laboratories in the United States than among themselves in Europe.

Some of the reasons are primarily administrative, and often relatively trivial (even though they may take a substantial effort to change). There are complaints, for example, of the difficulties that can be encountered in opening a bank account in another European country, or ordering equipment from abroad.

It was primarily to address such questions that last week's meeting of science ministers passed a resolution on the need to take steps to remove the barriers to mobility of scientists within Europe. One of the suggestions to be studied, for example, is that all scientists should be provided with a European research workers' card carrying certain rights and privileges.

According to Mr Brooke, however, addressing administrative barriers is



Peter Brooke: addressing the European dilemma

only half of the answer. More imaginative steps were needed, he said, to help overcome obstacles stemming from history, psychology and prejudice, in order to give individual scientists a greater feeling of European identity.

Hence the suggestion for a new body which would "confer fellowships on a limited basis by election, offer prestigious awards for the exchange of scientists, hold meetings and so on". It is not the first time that such an idea has been proposed. Plans first discussed in the late 1960s for the creation of what eventually became the European Science Foundation also talked of establishing a body which, in both size and stature, might eventually perform for Europe the same functions as the National Academy of Sciences does in the United States.

The founders of the ESF, however, soon found that - at least at the time - the idea was impractical, and established a body with more limited aims, primarily to bring together officials from the principal agencies in different European countries responsible for

the organization of research. Dr Hubert Curien, the newly appointed French minister for research and technology, who is also the current president of the ESF, said last week that he did not necessarily see any conflict between the foundation and the new academy being proposed by the British government.

"Mr Brooke's idea seems to be quite different from the role of the ESF, and deserved to be studied," said Dr Curien. "If the idea is to create a body which will stimulate enthusiasm for international collaboration between scientists, that is certainly a role which is not being covered in Europe."

Mr Brooke himself suggests that, even if the new ideas are similar to some of those being tossed around 10 years ago and subsequently abandoned, it may have required a passage of time for them to become generally acceptable. It is certainly likely to benefit from various shifts in the political climate for science over the past decade.

One of the shifts is a renewed

interest in the potential long term economic importance of basic science, a factor which lies at the root of government interests in European cooperation in science, and contrasts to the situation a decade ago when - apart from exceptions such as particle physics - collaboration tended to concentrate on applied science projects.

The second, related shift, is a desire to loosen government controls on the activities of scientists. Mr Brooke and Dr Nicolson both emphasized that their concept of an academy is one which, like the Royal Society, would not only be run by members of the scientific community with minimal government interference, but also receive its full funding from private sources, such as foundations and corporations.

Thirdly, there is the unashamedly elitist philosophy behind the concept of a Europe-wide academy organized almost solely on criteria of individual intellectual performance. "The purpose would be to create an institution which young European scientists would aspire to join, and to which they would hope to present their research," says Mr Brooke, although emphasizing that, unlike academies in some European countries, its membership should be aimed "not at the level of emeritus professors, but at the level of active scientists".

Each of these three factors reflect broader trends in the science policies that almost all European countries have adopted to face the challenges of the 1980s, and as such, each helped to explain the relatively enthusiastic reaction that the proposal seems to have generated so far within government circles.

The scientific community, which was given little warning of the proposal before it was unveiled at the Paris meeting, has so far reacted more cautiously. The European science foundation, for example, is reserving judgment until more detailed plans have been spelled out.

The next step, according to Mr Brooke, is likely to be the setting up of a small group of individual scientists to draw up such detailed plans. He admits that "the idea will only take off if it appeals to the scientific community", but adds that he does not see it as government role to determine whether the idea is feasible. "All we can do is launch the idea, at least for debate."



John Hunting: Walked off the pitch for the last time

play, good efforts at a goal and good saves, according to Mr Hunting. If the sound of 60,000 people clapping can be described as insupportable, no doubt English fans would think it was. He never liked it.

But not every team was as reserved as the Congo. The Congo acquired a fearsome reputation after they had two men sent off in the 37th minute of their match against the US team - and the Americans' chagrin and bruised shins - still won.

Several days later all the referees were gathered for their morning briefing and announcements, when they and their interpreters turned as one and applauded Mr Hunting. Getting quite fond of this habit of clapping by now, Mr Hunting applauded them back. Then he turned to Mr Wong, and asked him what was going on. "You referee the Congo tonight," he was told.

Naturally there was no trouble: the Congo won fair, square and cleanly, got knocked out in the semi-final, and in the final between the China national team and the Germans - two Great Wall nations after all - Waldorf Mannheim won one-nil.

John Hunting was picked to referee the final, of course. Fairytale endings seem to be his speciality. He was born and brought up above a Leicester corner shop - compulsorily purchased and demolished by Leicester City Council in the 1950s to make way for building the polytechnic. Where he has worked ever since.

The poly sports centre was once a roller skating rink, where he spent adolescent evenings. But he wasn't the mispent youth type. Before he was 18 he realized a great career lay before him in very minor club football. So he took up refereeing instead.

He carried on through national service, trained at Loughborough

did some teaching and then went back to PE teacher training at Leicester. A senior Leicestershire referee who encouraged him went on to be president of the referees' association.

John Hunting meanwhile was inching over the hurdles in the long-running referee's career stakes: linesman to referee in the amateur league; linesman to referee in the Leicestershire senior league; linesman to referee in the professional football league. He made that in 1968, a mere 15 years after he blew his first whistle.

Then in his very last season, the call to Wembley came. The media, liking fairytale endings, kept him busy right up to the day of the match. It also meant everyone he had ever met knew he was going to referee the Cup Final - and most of them wrote to him.

The long walk through the tunnel onto the Wembley pitch is unlike other matches because you cannot

hear the crowd, he recalls. The first thing he did coming out into the light was to spot his family, seated near the Royal Box.

The lack of abuse - it was billed the "friendly" final - struck him straight away. The fact that it was the Cup Final and his last match only struck him about 10 minutes into the game.

John Hunting is a slight, reserved man with a professionally firm voice. But there is still a tremble in it when he talks about Wembley two months ago.

"When I got back to the dressing room with my medal, it was just a sense of relief that I had accomplished what was possible - a referee's dream. Something that only a referee can experience. The three colleagues I was with, they understood the situation I was in. We went into the dressing room and we didn't speak. It was my last game on the English scene. And it was emotional. It was such a relief."



The CATE membership. Front row, left to right: Dr Hester Hallaway, principal, Trinity and All Saints College, Leeds; Dr Marian Gies-Jones, senior mistress, Ysgol Aberconwy; Mr Peter Ward, personnel director (UK), Hewlett Packard; Dr William Taylor, principal, University of London; Dr Bernard Martin, reader in sociology, Bedford College; Councillor Frank Cogan, chairman, Hertfordshire County Council; Mr Peter Griffin, head teacher, Windsor Olive County Junior School, Cardiff, and president, National Union of Teachers. Back row: Professor Anthony Becher, director, school of education, Sussex University; Mr Lemuel Evans, Welsh Office assessor; Mr Renford Bambridge, fellow, St John's College, Cambridge; Mr Peter Snape, general secretary, Secondary Heads' Association and Headmasters' Conference; Mrs Pauline Perry, chief inspector, HMI; Mr Norman Morris, Northern Ireland Office; Mr Derek Mortimer, Walsingham Polytechnic; Mr Ian Langtry, DES assessor; Mr Michael Dixon, education correspondent, Financial Times; Mr William Wright, chief education officer, Wakefield; Dr David Shadlow, principal, Worcester College of Higher Education; Mr Peter Scott, head teacher, City of Leeds School and chairman, Association for Science Education; Mr Andrew Collier, chief education officer, Lancashire; Councillor Patrick Mullany, chairman, Doncaster education committee.

Taking some of the credit

Patricia Santinelli meets William Taylor, chairman of the Council for the Accreditation of Teacher Education

process and content.

"I see CATE as a great opportunity to do something for the quality of teacher education and since we have been given the opportunity I hope we do not lose it because teacher education is very high on the agenda," Dr Taylor said.

The CATE, which was set up at the end of last year at the end of a tortuous process, is charged with judging the suitability of both existing and new courses for the preparation of teachers against a set of rigorous criteria, initially for a period of four years. It then has to recommend approval or non-approval to the Secretary of State for Education.

His emergence owes as much to developments, or rather lack of them, in the last 10 years as to more recent initiatives by Her Majesty's Inspectorate. These began with the circulation of two papers on qualified teacher status and on content which resulted in official publications and culminated in the White Paper *Teaching Quality* which set out the criteria for assessing courses.

Although its publication infuriated ACSET members since it preempted their own work in this field, the committee set out to modify the criteria's emphasis, as well as deciding how they could be applied. After a review of the existing professional committees it concluded that a single national body would be necessary if there was to be any consistency.

Not surprisingly, the rather devious methods by which Sir Keith Joseph and his department chose to impose greater control on the content of courses, as well as what emerged

From being the deputy head of a secondary modern school - a time at which he was also teaching adults in the evening and doing his PhD - he went on to become senior lecturer at St Luke's College, Exeter, and then Bede College, Devon.

On a continuing upward path he moved to lecture in education at Oxford University, and then in 1967 became one of the youngest professors of education when he took over the directorship of the school of education at the age of 37.

At the same time Dr Taylor sat on several committees including the ACSET and is currently president of the Council for Education in World Citizenship and the English New Education Fellowship as well as the chairman of the National Foundation of Educational Research. He is the author and editor of several books, one of the most recent is *Metaphors in Education*.

Undoubtedly, he says, his most challenging job was the directorship of London University's Institute of Education, a post he held for 10 years and left only recently. He says this was not only because of the wide responsibilities involved but because 1973-83 was a very difficult period for teacher education.

Indeed it is quite plain that he sees the setting up of the CATE as both another challenge and another achievement. This is not because he is keen to chair yet another committee, but because he sees the CATE very much as a welcome move towards greater professional regulation.

The CATE, he says, will deal with issues of quality and content - a much neglected area, not only because of the goal in the last 10 years, but because of the whole people tend to be more concerned with structure than with

subsequently to be a star role in the process for HMI, has led to a great deal of suspicion about the independence of such a body.

But Dr Taylor points out that responsibility for approval has always been the Secretary of State for Education's. Moreover he sees independence and dependence as a rather spurious issue.

"We shall make our independence plain by the nature of the advice we give. It lies to be established as we go along and gain the confidence of people in the field. Anyway it is easy to make statements now, it would be far better if people assessed us in a couple of years," he said.

Similarly he refuted any suggestion that the 18 members of the council were not representative of teacher education or the profession as a whole, or that few possess recent and direct experience of teacher training.

He is equally abrasive about the question of resources. The ACSET recommended that extra resources should be provided but this has not happened.

Dr Taylor said that the lack of new resources must not be used as an excuse for inaction. "The three chief resources we have are the knowledge and experience of our members, the confidence of the field and the importance of the task. Other kinds of resources are less important," he said.

Dr Taylor pointed to three issues which he regarded as particularly important within the council's criteria: local committees, relationships with schools and subject studies. He pointed out that the local committees whose approval would be necessary before courses were submitted were not intended as mini-CATES.

"Basically we shall be mainly concerned with strengthening courses, identifying their weaknesses and making sure that the public, the professions and parents are satisfied that our teacher education institutions are providing quality of preparation," he said.

The criteria

The criteria for judging courses are grouped under four headings: links between training institutions and schools; subject studies and subject method; educational and professional studies; selection and admission to initial teacher training courses. The criteria require in particular:

- that postgraduate certificate in education courses should be at least 36 weeks long;

- that institutions should develop and run their initial teacher training courses in close partnership with experienced practising school-teachers;

- that teacher trainers should maintain regular and frequent experience of classroom teaching and be released for this purpose;

- that teaching practice and school experience together should amount to no less than 15 weeks in post-graduate courses and three years in concurrent courses, and not less than 20 weeks in the four year

- that higher education and initial teacher training of all intending teachers should include at least two

full years' course time devoted to subject studies of higher education level, and courses should include methodology of teaching the chosen subject, specialism or curricular area.

- that entrants to courses should have at least grade C in O level maths and English and students going in for secondary teaching should hold an A level appropriate to their intended main subject;

- that students should be prepared to teach the full range of pupils they may encounter in an ordinary school, with their diversity of ability, behaviour, social background and ethnic and cultural origins;

- that institutions should carefully assess the personal and intellectual qualities of candidates and should involve practising school-teachers in student selection.

Nobody should be awarded a BEd degree unless they have proved to be a competent teacher. Institutions should identify as early as possible students who are unsuited to teaching to enable them to transfer to other courses.

The search ends for a research policy

John O'Leary outlines the long awaited recommendations of an NAB working party.

Almost unnoticed in the unaccustomed splash of publicity which greeted the National Advisory Body's advice to the Government on long-term policy came the conclusion of a debate which partly symbolizes the NAB's stated concerns about status and equal treatment with the universities. For more than 18 months the body had been struggling to find agreement on a research policy for polytechnics and colleges. Stalemate had been reached last year, making the issue one of the few on which the NAB had failed to deliver.

Everyone was agreed that the public sector had to have a research role, that a great deal of research was already being done and that this needed both protecting and expanding. Inevitably, the stumbling block was money. The NAB secretariat produced a discussion document which assumed that no additional resources would be available and proposed that a set amount should be set aside from the advanced further education pool.

The paper drew a distinction between "updating study", and activity which was not merely desirable but compulsory for lecturers, and genuine research, which was concerned with the extension of knowledge and understanding in the public domain. It considered trying to identify the amount of pool income allocated to updating (while recognizing the difficulties inherent in such an exercise) but preferred the safeguard of a minimum unit cost for advanced courses.

However, the real argument was over the establishment of a research fund, which would be drawn from the pool and distributed selectively. Such a fund was not intended to provide an alternative source of funding to the research councils but to fulfil a pump-priming function, providing institutions with the minimum level of resources necessary for research. It was suggested that there were advantages to a small fund, of perhaps £6m, initially, so as not to discourage authorities from continuing to give what support they could to research.

This sum might provide 400 research staff or 400,000 person hours, and might also be used for capital projects. But the secretariat made no bones about the effects of establishing such a fund. "Any sum taken out of the pool would require either student numbers or unit costs to fall by the same amount, or balance between the two to be achieved," the paper said. "In reality the main impact is likely to fall on unit costs, for it would be difficult to defend a reduction in access in order to protect research."

In the consultative exercise which followed, it soon became clear that this was too high a price to pay. The idea was shelved and a new working group formed under the chairmanship of Mr Christopher Ball, chairman of the NAB board, to consider both the planning and funding of research in the public sector. The group also included Sir Douglas Hague, chairman of the Economic and Social Research Council, and Professor John Kingman, chairman of the Science and Engineering Research Council.

Although the group has not entirely abandoned the idea of reserving funds for research from the pool, its report has had a much easier passage. Indeed, it was essential that it should if the group was to meet its own objective of influencing the pool allocation for the 1985/86 academic year. With announcements on the distribution expected before Christmas, even minor changes in methodology have to be agreed soon if they are not to wait another year.

The report, which was approved at the same meeting which finalized the long-term strategy document with its own commitment to college and polytechnic research, has five main conclusions.

- Research in the broadest sense is necessary to sustain effective advanced level teaching, and should be associated with it wherever it occurs.

- The need is particularly clear in relation to honours degree and post-graduate teaching, with a research ethos essential in departments engaged in such work.

- Existing support for research should be preserved, the appropriate element of the pool being allocated on an institutional basis pro rata to the volume of such work.

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- Existing support for research should be preserved, the appropriate element of the pool being allocated on an institutional basis pro rata to the volume of such work.

- The contribution of the public sector to the application and advancement of knowledge should be recognized, and this contribution facilitated by the highly selective allocation of additional funds.

- The NAB should seek initially an additional £10m from the Department of Education and Science to support this work.

- A sixth recommendation was that the group should carry out further work on the mechanism for allocating such extra money, while the NAB committee had added a requirement for further investigation of ways to assess the amount to be reserved from the pool.

The new report is not as different to its predecessor as it might seem at first sight. The distinction between true research and updating is retained, with the cost of updating being borne by the pool simply in a more explicit way than at present. Only the claim for more money, which the group considers should rise to £20m within three years, is really new.

But the report does succeed in conveying a sense of urgency about the plight and the value of research in colleges and, particularly, polytechnics. Interestingly for a group chaired by the chairman of the NAB board, it does not shrink from spelling out the dangers of the body's policy of moving towards staff/student ratios of 12:1.

"We have every sympathy with NAB's overwhelming desire to be true to the dominating value of the sector, namely serving society through the preservation of access to all who might benefit from higher education and who wish to obtain entry to it," the report says. "Yet there is a real danger than in serving quantitatively in the short term the aspirations of potential students its policy may do damage to their long-term qualitative needs."

Even allowing for the use of time free from teaching, the group expresses the fear that the unit of resource may be dropping to the point where the pressures on staff pose a serious threat to essential research activity. For this reason, the first priority is attached to preserving existing support.

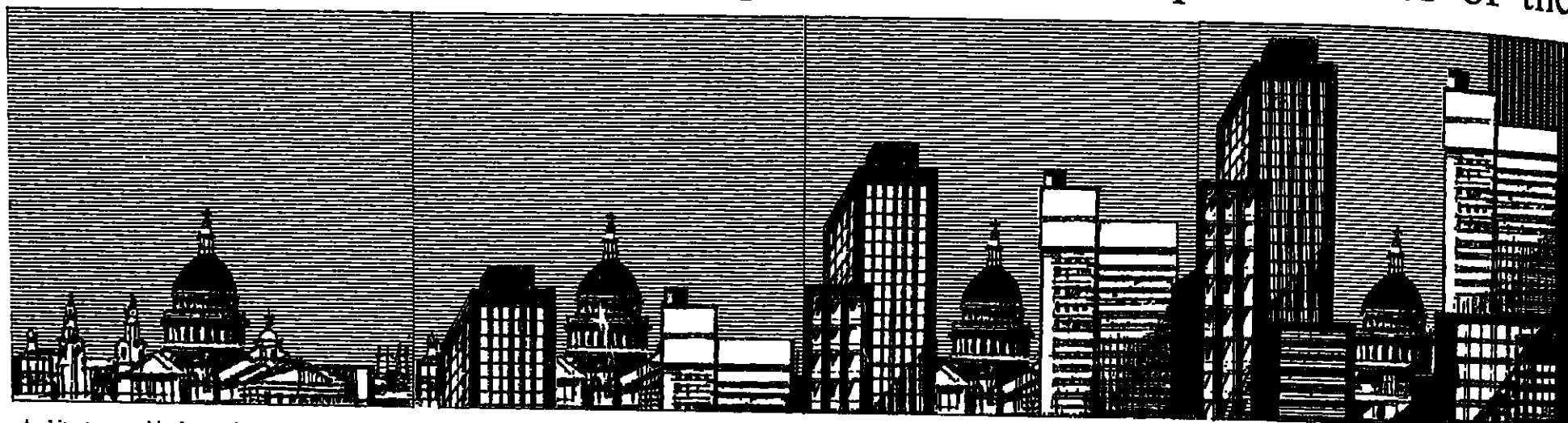
Beyond that, the need is for new money, although some may be surplused to that 40 per cent of the SERC's teaching companies are located in polytechnics or colleges. The group wants to build on research strengths, allocating money very selectively for a three or five-year period.

Thus far the high-powered group has met little opposition, but the real work is yet to come. It will be surprising if ministers are prepared to give extra funds in advance of their green paper on higher education, and the group will do well to come up with an acceptable way of assessing existing spending in time for the current pool discussions. None the less, it has put down a marker for the future which will fill an important hole in the still evolving process of planning the public sector.



Christopher Ball: working party chairman

Three leading academics explore the social responsibilities of the



Architecture suddenly, perhaps temporarily, has become a subject of wide public debate. This year the Royal Institute of British Architects is celebrating its one hundred and fiftieth anniversary with a festival of architecture. At its May Hampton Court gala evening launch, accompanied by Patrick Libby's masque on *The Spirit of Architecture*, Prince Charles dropped his now celebrated bombshell critique of today's architects – condemning their loss of contact with “ordinary people”, and deriding the topical Mansion House Square and National Gallery projects.

Of more immediate interest to readers of *The Times*, the joint National Advisory Body/University Grants Committee study of the future of British architectural education was published this week. A striking feature of the debates surrounding these events is the homogeneity of the language used by both opponents and defenders.

The organization of the festival has linked architecture not only with royalty, but aristocracy and palaces; with music, drawing, sculpture and painting; with the church, historical conservation and commerce; and with nature (as for instance in the exhibition of animal “architecture” – nests, cubs, burrows and dams – at the Natural History Museum). So this “spirit of architecture” emerges as elite, historically precious, sacred, “natural” and above all, artistic.

The medieval church building programme and Renaissance patronage by pope and prince were the basis for the formulation of architecture-as-art (beaux arts) in the Enlightenment and the Industrial Revolution. Elsewhere (*THES*, April 29, 1983) I have described how these social and technological upheavals required that the huge building programme of private and public developers reinforce the new social structures. Tony King, in this issue, speaks of buildings as “producing and reproducing society” and of their social meanings. To succeed, the messages conveyed by buildings were controlled and those which could safely be left in the hands of architects whose area of operation was so defined as to make them virtually impotent.

In any case their freedom even in this area was apparent rather than real, as Prince Charles and his equally interventionist predecessor, Albert, have shown. Architecture became defined as abstract, personal, intellectual and artistic. There was a silence about everyday concrete and social experience. This experience operates in at least three powerful ways.

First, all buildings are settings for rich aesthetic experiences, delightful or appalling, achieved through style, mass, proportions, detail, colour, articulation and texture – that is through forms. This is the formal discourse. Second, before they are built, they are described by clients and afterwards by the critics and the public in spoken or written words which refer to purpose or function.

This language has a vocabulary, syntax and semantics – that is, structure – carefully chosen because it is that which best embodies the intentions of the owners. Or it best locates critique into a field where the building's meaning is limited, defused or selectively heightened according to the needs of the same owners who exercise institutional control through the popular and scholarly media. A public whose consciousness of architectural discourse has been formed by these two uses of the language, will itself use it – thus Prince Charles echoed widely held popular opinion.

This language is never innocent, though building briefs, building regulations, descriptions of buildings by Parliament, finance institutions and even historians have been presented as neutral, technical processes – the outcome of objective “factual” knowledge of experts. Clearly, however, the choice of alternative labels such as lunatic asylum or mental hospital, sitting room or parlour, housing development or housing scheme, common room or recreational space, and art gallery or centre for the visual arts, entails a rich set of meanings which determine, long before any architect appears on the scene, many of these spaces' salient characteristics.

This language is the functional discourse. It makes highly predictable what activities will, eventually, be conducted within the spaces. People respond to these built-in meanings of the functional discourse in highly conforming ways. So some activities will be regarded as appropriate to a space; others as permissible but unusual; others as eccentric; and yet others as forbidden, under pain of institutional sanctions imposed by parents, heads of schools, matrons, station master or office manager and, in extreme cases, of legal sanctions enforced by the police.

The third experience is that which makes for awareness of where buildings are in relation to other buildings and streets and the location of rooms within a building in relation to entrance, corridors, stairs and other rooms. Some spaces, and hence people, are near the entrance, some far away “deep” within the building; some can be reached only through another space, others by a variety of routes.

These relationships give towns and buildings a spatial structure quite independent of formal style or function which can be analysed and described by topological methods. These yield a rich variety of tree-like, ringy and other webs, which relate to people's relative position in a city or building, and hence to their position in a class structure or organizational hierarchy.

Whether they are occupants, visitors or merely passers-by, this spatial experience is concrete and powerful. Descriptions of buildings in these terms form the spatial discourse.

All three discourses have social meaning – through images, function and space. Moreover they are independent of each other, in spite of Sullivan's and the later functionalists' belief that “form follows function”.

Two hundred years ago, owners came to an agreement (a pact) whereby their architects were given a semi-autonomous freedom over the obviously expressive, surface discourse, while they established control over the two underlying ones. To clinch this arrangement it was not only necessary to neutralize the explicit functional discourse, but also to set up architects' education in an art framework.

École des beaux arts and art colleges became the natural homes; ateliers, studios, snooty and bohémian became a part of the standard vocabulary and images. The clients, professional institutions, schools, media and the public all expected and continue to expect these stereotypes to be fulfilled.

A design for the future

about whether it falls into the former. The relationship is similar to that between art and pictures, or community and people. A veil (Tony King calls it a mask) hides these invisible entities, which it was the festival's intention to remove: it was to allow the public... to see through the veil... and to demystify architecture... with a consequent increase in architects' credibility.

The greatest mystery, generated by the festival, is how music recitals in country houses, drawings by Palladio, lectures on the “common source” of music and architecture in “their harmony in nature” are supposed to explain to the present generation of users (victims?) their bus stations, housing, offices and supermarkets. It has been outraged, bored, alienated, impoverished (by energy-disastrous buildings) made physically and mentally ill and, occasionally, killed, by the average building of the last 30 years. Nothing could demonstrate the power of the fabricated “spirit” of architecture better than the apparent ability of a razzmatazz of computers, hi-tech, balls, ceremonies, masques, balloons and canopies to wipe from the public's consciousness the memory of this recent history.

Prince Charles also made a plea for community architecture, in which “ordinary people” could find architects “who listen to their comments and their ideas” and try “to design the kind of environment they want”; designs which would be “visually beautiful as well as socially useful”. An unemployed member of a Glasgow housing association had earlier spoken almost identically at the Scottish launch of the festival.

The Royal Institute of British Architects, which had already made community architecture moves, took the Prince's message seriously, especially as these architects are threatening a break-away movement. Features of the movement suggest that it merely reinforces the 200-year-old process.

But how would it work for the National Gallery or the Palumbo office block? The political mechanisms for effective realization of values and feelings about buildings at this scale, often dimly perceived and poorly articulated, simply do not exist. High-style architects share with community architects a sentimental reverence for the past (the typical member of the former group inhabits a Georgian house) and an unfounded optimism about the future.

The NABUGC exercise will undoubtedly release a flood of education

al debate. The schools, through the professional recognition system, are creations of the RIBA and the Architects' Registrations Council of the UK, reproducing the socially unconscious and artistically free graduates the market requires.

Long ago the separation between design and production has been achieved as the architectural response to the division of labour perfected in the Industrial Revolution. Architects thus contribute to the fracturing of society and human nature, and specifically, to the disjunction between imagination and materiality. The limited definition of the ends of buildings is accompanied by an equally limited view of means.

The schools will be debating with two government bodies, one of which has at its head Christopher Ball, who at an important national meeting on education at the RIBA defined architecture as “frozen music”, a borrowed definition with an interesting provenance.

So what are the hopeful elements in the situation? First, that debate is taking place with a level of public involvement unprecedented in recent times. Second, that in spite of the dangers of community architecture, there are some designers taking the role of environmental midwives – bringing expertise to bear on the release rather than the creation of solutions; and they are broadening issues far beyond the boundaries of debate on formal alternatives between high art or vernacular hatching.

Third, critics, historians and scholarly designers are attempting to break the mould of leonine descriptive methods and replace it with analysis.

Finally, there is a wider political critique of market forces, economic conditions, Darwin's laws (of the jungle) and a realization that they are not to be trusted to shape human society or its buildings. A first step in this realization is the fracturing, fragmenting and destruction of the discourse of architecture. Architecture is dead, long live architecture!

Thomas A. Markus
The author is professor of building science at Strathclyde University.

Good life

In 1755 the University of Pennsylvania was founded on the basis of a curriculum laid out by Benjamin Franklin in *Proposals Relating to the Education of Youth in Pennsylvania*. The curriculum, containing only “those Things that are likely to be most useful and most ornamental”, included “something of *Drawing*”, because, as explained in a footnote: “Drawing is a kind of Universal Language, understood by all Nations. A man may often express his ideas even to his own Countrymen, more clearly with a lead Pencil, or Bit of Chalk, than with his Tongue.” In addition Franklin suggested for the students that “while they are reading Natural History, might not a little *Gardening, Planting, Grafting, Inoculating* etc be taught, and practised”.

Perhaps the sense of values underlying the choice of this part of the compulsory curriculum was the fundamental source of the beautiful modern places created in the eighteenth century. For design then displayed a profound understanding of both geometric and biological systems, a combination which is today categorized as landscape architecture.

In landscape design, the future has to emerge from the past. Some, like the English landscape garden, are concerned with the creation of a new landscape, while others, like the French formal garden, are concerned with the improvement of an existing one.

Marine walk at Liverpool's International Garden Festival, 1984.

On the one hundred and fiftieth anniversary of the Royal Institute of British Architects, the RIBA Journal put out a festival number. The cover illustrated three festival buildings, two of which were initiated by landscape architects, namely Crystal Palace designed by the nineteenth century landscape architect Paxton and Arup Associates' building for this year's International Garden Festival in Liverpool, the circumstances for which were created by Rodney Beaumont and Richard Cass from a most improbable site of dereliction.

It is not surprising that for symbols of celebration architects should choose the work of landscape architects, whose field of design is concerned with the initiation of life, combining both an elemental creativity

and a faith in the future. Perhaps cities would be more liveable if the landscape approach were more often chosen to design less fanciful sectors as well. For in certain profound ways the mode of thought which creates a successful garden or tract of countryside is the correct mode to create the spaces which make fine cities.

No garden, however modest, can be successful without a grasp of the qualities of what is already there – the soil, the trees, a moist hollow for the rain, a draughty corner in need of new shelter, the hidden qualities of the underlying soil with its variable degrees of fertility and acidity, a desolate wall perhaps not ideally sited but an irreplaceable guardian of a site's sunspot perfect for a seat by a choice scented flower.

Landscape designers must survey and understand these things before they select that to keep and what to take away for the particular kind of garden being created. Such techniques could also reveal the existing qualities in a city and forest effects; for instance it may be beneficial to remove certain structures to provide space into which the low winter sun

can gleam, or it may be wise to keep certain trees and buildings lest a place becomes windy and inhospitable.

Gardens are concerned with living things, not least people. At a mundane level the kitchen garden has to produce an environment in which produce thrives; this may be achieved with a grandiose rectangular wall or by cobbling together a length of house wall, some boarded fence and lengths of hedgerow. The human body possesses physical sensibilities comparable to those of vegetation. But people also move about. They need convenient and dry paths, private and safe play places. No garden designer would be satisfied with a layout which encouraged a valding ducart to drive across the garden path.

Yet at the very heart of our great cities we see pedestrians so ill-served for that they are forced to struggle into speeding traffic or clamber down dank stairs into ill-lit passages, which blind mules so that machines, which could be helpful, can pass undisturbed. Often the old and young are forced to walk into puddles, while

cars park their rubber tyres on suug well-drained pavements.

The needs of people out of doors and the well-being of vegetation are the basic aims of landscape design. Wise expenditure in cities would dispose both buildings and roadways to make places for people to use, as indeed is commonplace in many modern German cities.

A city is for more than physical comfort and safety. It is also ordered for delight and a sense of orientation. In a park the disposition of trees or towards towers and groups of trees or the surprise of leaving a shady secret wood to see suddenly a distant sheet of water are achieved by landscape techniques which could be equally useful in the arrangement of towns.

These techniques include sight lines, modulation of the ground surface, soil profiles capable of supporting trees to scent the air, comfortably-proportioned steps, well-laid paving, and buildings arranged to guide people among warm, well-sunbaked, safe and sheltered places.

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architectural profession Building society on a global scale

The recent inquiry into the City of London's Mansion House Square project has again focused attention on the unsatisfying, if not unsatisfactory, nature of much of the environmental debate. In many cases, discussion about the architectural merit of buildings is reduced to a more or less polite slanging match with “expert witnesses” wheeled in to represent the predictable views of various social and professional groups: there is an urgent need to both deepen, and broaden, terms in which architecture is discussed.

One step in this direction might be to stop evaluating buildings in subjective aesthetic terms and start looking at them as social objects: at the activities they contain, the social values they represent and the material conditions which produced them. What, in short, do they tell us about the economy and society in which we live, and more especially, about the changes taking place? This is not the sole answer to the problem of “aesthetics” but it helps clarify some of the issues.

The Mansion House project (and Prince Charles's reaction to it) provides an excellent example. Below the present London skyline so close to the River Thames there were, among the City's institutions, about 80 foreign banks. Today there are 460, including representatives of all but four of the world's largest 100 banks; the Bank of America, for example, employs over 1,000 people in the City. The tallest building in the City (and Britain) houses the international division of Britain's second largest bank which in 1982 opened a new headquarters building in New York and a new division in Miami.

All this – and more – is evidence of London's rapidly-developing role as a finance and professional service centre in an increasingly integrated international division of labour (other evidence is the disappearance of her industry). For Prince Charles to suggest that the new “great glass stump” was better suited to downtown Chicago is to miss a major point: in many respects, the City of London is downtown Chicago. Like New York, Frankfurt or Singapore, it is part of a global urban system in which the internationalization of capital has brought the internationalization of institutions and the building forms which contain them.

Like the institutions, high-rise office blocks are a product of the capitalist world economy: the land market, developers, corporate clients, investment of pension funds are as essential for explaining the London office block as the peasant economy, tribal structure and sexual division of labour for the spatial arrangements of huts in a Zulu kraal.

To talk simply of the “Mies” build-

ing, therefore, is to point up the shortcomings of both the vocabulary and framework in which architecture is often discussed. Even the terms modern and international, applied to stylistic attributes of building (as in modern movement or international style), mainly serve to mask the immense economic, political, social and cultural transformations to which these two, very loaded terms refer.

This is most easily illustrated in regard to the so-called modernization or westernization of environments in Asia, Africa or – especially today – the Middle East. The historical process of urbanization by which many of these societies were incorporated into the global economy was not only economic, political and social, but also physical, spatial and architectural.

The institutions intrinsic to the process – the banks, colonial governments, insurance and shipping firms or later, the multinational corporations – brought not only economic and cultural transformation but with them, the buildings and urban forms (including urban planning, technology and architectural style) in which they were contained. The changes in the forms of household and property, or the move by social elites from traditional courtyard dwellings to a spacious villa in the suburbs are not just international, western or modern but represent a shift to the consumer-oriented market economy.

Of course, these over-simplifications hardly do justice to the range of social, cultural, or political variations in the circumstances described. Nor, to return to the example of London, do they prevent us from recognizing the degree of political autonomy exercised over changes in the environment or the particular interests or cultural values of those on whose behalf political power is expressed. Yet until the different levels of explanation are acknowledged, it is impossible to separate the universal from the particular, let alone (to return to our first example) the contribution of some individual architect.

Considering the social meanings of buildings and environments implies a knowledge of economic, social and cultural change, not only in one's own society but in others. If transnational banking is changing the face of the City, transnational production and consumption is changing the suburbs, as well as the entire urban and regional system in Britain.

These developments imply an analysis of buildings, spaces and environments within a far broader international framework than is often assumed. In the 1980s, the Costa Brava is as much part of the British space economy as was the Indian tea plantation 100 years before. Arab oil surpluses generate new office developments in London or

refurbish country houses just as British contractors construct time-share apartments in the Canaries from profits made in Saudi Arabia.

Yet despite these developments, the fiction of a national economy is maintained, rather than a global system of production in which so-called third world squatter settlements play an essential part. Development studies serves to keep first and third worlds apart.

The growing awareness of the economic, social and political dimensions of architecture, building and planning has begun to be reflected in academic courses, particularly in urban design. Some of the awareness has come from research on social issues such as the relation of gender to the spatial and symbolic aspects of environment or –

the future can be designed to achieve such qualities. But priorities will need to be changed. The place-maker must precede and define the context for the object and structure-maker. A culture which wants fine cities must take interest in the character of this space between buildings and demand that it is understood in terms of all the forms of life dependant upon it.

These are not matters of architectural styles, but have to do with the whole mode of operation by which places are made. The knowledge which is available about ecology, microclimate and human perception out of doors has to be converted by a design process into places.

A city for people can neither be created solely by counting passenger car units and square metres of office space nor by designing fine building interiors. A city for people needs to be based on an understanding of people and of nature at large, homo sapiens being but a single species on a complicated heavenly body, the working ecology of which should permeate every place upon it.

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Ernest Boyer



Developing a commitment to lifelong learning

America is aging. In the present decade alone, the over-60 population will increase by 35 per cent. Those in the 50 to 59 age bracket will rise by 17 per cent. And since we Americans continue to live longer and have fewer babies, this trend is likely to persist.

The traditional work pattern is also breaking up. People are less involved in earning a living from early morning to late at night five days a week. The average working week in America - 62 hours in 1900, 43 hours in 1945 - now stands at about 37½ hours.

Further, many older workers now find themselves outdistanced by the pace of change. All too often, the individual forced into "early retirement" (as an alternative to simply being fired) has fallen behind in his field, been judged redundant, and quietly put out to pasture - with years of potential productivity left. Such situations are not only economically wasteful, they are tragic in simple human terms.

The nation's colleges and universities are feeling the impact of these trends. Increasingly, education is becoming something more than a full-time pre-work ritual exclusively available to the young. In 1972 about 28 per cent of all college students were 25 and over. Ten years later, the number had jumped to over 35 per cent. And during this same period, the increase in students of 35 and older was an astounding 77 per cent.

This impressive shift is due largely to a growing number of part-time students. In 1972, such students constituted about one-third of the entire higher education population. In 1982, part-time students comprised over 40 per cent of the total. And it is estimated that by the year 2000, almost half of all students enrolled in American higher education will be part-time.

A related trend is the dramatic expansion of the two-year college. Before 1970, these institutions attracted less than 20 per cent of post-secondary students. Today, over 30 per cent of all students are in community colleges and increasingly the emphasis is on community, not college.

The two-year institution offers a stunning variety of programmes for older students at convenient times and the move is away from the "traditional" transfer role that prepares students to go on to a senior college or university. There is, in fact, something called the "reverse transfer" going on. For example, in 1979, approximately 15 per cent of all students in Illinois who transferred that year left public four-year universities to matriculate at community colleges. That same year, more students went from the campuses of the University of California to community colleges than the other way around.

The trend persists. Many graduates from liberal arts programmes of four-year institutions find themselves simply less able to compete in today's tight job market that often demands very specific work skills. They return to two-year college to better "train" themselves in one specific area of work or another that currently seems to be in most demand.

Retirees are also more actively engaged in higher education. The later years of life are being thought of as an ideal time for reentering the world of learning. Occasionally, colleges and universities are using their residence halls to accommodate retirees, providing not only housing but the opportunity for continuing education. Other colleges are asking: If we can go into the factories, why can't we also go into

the nursing homes and the retirement villages? Why should a person, after a lifetime of productive work, be allowed to vegetate intellectually simply because of the physical limitations of age? A few colleges are actually establishing retirement centres in proximity to the campus.

It is not just traditional higher learning institutions that are catering to mature students. Corporations are starting their own colleges to serve adults and industries are offering more and more education programmes for their own workers, providing varied schedules for mini-courses, seminars, video-lectures and the like. The world of learning and the world of work are beginning to overlap and intersect.

Looking ahead, labour contracts can be expected to include "agreements for continued learning", arrangements that free the worker for several hours a week to take a college course in his or her factory, store or laboratory - not only technical courses relating to a specialty, but also in liberal studies. And more and more working adults may be granted mini-sabbaticals (just as college professors now are) either to refine their special skills or for their general intellectual and cultural enrichment.

Everyone stands to gain from these developments. The individual gains by acquiring or updating skills that enhance prospects for job placement and salary increments. Additionally, the individual's sense of self-worth is sharpened as he or she recontacts with ideas important to the person's place in society. This is lifelong education for careers and citizenship as well.

Industry gains as better educated, better trained workers, older and younger, contribute to productivity and efficiency in the workplace as well as to creativity and criticism in product design and corporate strategies. In the United States, as in Great Britain, there is concern that business and industry be fully competitive internationally. Higher Education has a crucial role in America's economic resurgence.

Colleges and universities profit too. No longer are campuses youth ghettos, viewed with suspicion by "grown ups" in the outside world. And students, in turn, are looking with less suspicion on life beyond the campus. The time may soon arrive when the campus and the town will truly mix. A college community that is truly a community may emerge.

Here then is the picture. Higher learning in America has committed itself to expanding access, unqualified by considerations of race, sex, religion, or social status. Increasingly, universities are affirming with equal seriousness that access to education should have no strings attached in terms of age. An older population is demonstrating that learning can be lifelong.

However, just below the surface of this transformation there are questions of profound importance to academe. How can this continuing expansion of access to higher education be balanced by the essential commitment to excellence? And how can a sense of campus community be maintained as a variety of part-time students, with differing needs move freely in and out? Reconciling tradition and change, here as elsewhere in American life, remains the most fundamental issue for those who guide the destiny of our institutions of higher learning.

Jam on the bread and butter

Perhaps the greatest resource in institutions of higher education is the population of research students. This year's cohort is about to embark on what for a while - and in some cases a long while - will be a dominant task: choosing a research topic. There are many reasons why the choice and the approach are likely to result in a dry thesis destined for the dust on library shelves. It is worth trying to understand these reasons as a basis for developing better strategies; to replace tedium by excitement in what should be one of the best times of a (potential) academic's life.

There are two main kinds of factors which limit choice. The first set relates to the definition of the topic; the second to the way the chosen subject is treated. Almost inevitably, the new student is likely to be pointed to a subject which will form an additional brick for an already existing edifice. This is a feature of a discipline in a Kuhnian "normal" state, and the choice is likely to be further restricted by schools within the framework and by the traditions of the department - ultimately by the capacity of a member of staff to supervise.

The way in which the already-narrow topic can be treated will be further limited by a mixture of convention and practicalities. The thesis will have to be rigorous; there will be a requirement to add depth to what exists. Practically, the student will be limited by his or her skills and the training available to extend these; by data or source availability. Above all, if the thesis is to be produced in anything like a reasonable time and satisfy examiners, choices need to be safe and conservative on all counts.

The system demands a bread-and-butter product. Without a revolution, this will continue to be the case. Realistically, therefore, what we can seek to add is some jam. There will continue to be, as now, a small number who can gamble, can choose a topic and approach which are so dramatically different that the result will be applauded for its originality and unconventionality - even if after rather than during the event.

How can we begin to develop new strategies for research students (and supervisors) as they embark on their new careers? The first point to emphasize is that the assignments have to be made: what makes a particular subject approach interesting and important? These judgments need to take into account economic and social pressures (if only to resist them) as well as contemporary thinking about what is feasible and what is not. But what we need to do is to articulate some questions which enable the judgments to be made more effectively.

There are five basic issues to be tackled. The first is the definition of the field and boundaries which constitute the system of study - the system of interests. The second is the level of resolution at which the system is to be viewed. Thirdly, where to place oneself on a partial-comprehensive spectrum. Fourthly, issues of theory; and fifthly, the availability of methods or whether methodological development should be an integral part of the research.

The first issue is the most obvious to understand but is nonetheless crucial: a brief-in-the-wall definition is likely to be imposed at this point. The rest are on the whole less obvious and are not usually posed as explicit questions; the answers are already built in to both the student's education and the supervisor's ongoing practice.

"Level of resolution" involves up to three dimensions: category definition, time and space. These represent the level of detail at which the entities within the system of interest are to be described: individuals or social classes say; genus, species, sub-species? Observations every few milliseconds, minutes, hours, days, years, centuries. A nation, regions, towns, streets. Many interesting research questions lie at the boundaries of levels resolution. In economics, for example, most approaches are either micro or macro: consumers and firms on the one hand, recognition that there are alternative scales - urban and regional for example - has generated important new subjects though they still lie outside the mainstream. It is also important to recognize that some phenomena only exist at certain scales and the "aggregation problem" - the relationship between scales - again illustrated by economics where it is explicitly acknowledged - is often an important research area.



knowledge - is often an important research area.

The decisions taken up to this point build up the beginnings of a picture of the object of study and they emphasize the extent to which the nature of this picture is created by the student's understanding. First, it is necessary to be involved with some kind of theory: a set of hypotheses to be developed or extended from the current state-of-the-art; or at the very least, an understanding of someone else's hypothesis which are to be tested empirically. Then, whether developing or testing theory, appropriate methods are needed for actually making progress.

My contention is that what faces most new research students is a set of five dimensions. What I am advocating is a loosening of these constraints; that students should be encouraged to question the underlying, implicit, assumptions basic to the state-of-the-art which is their starting point.

It is nearly always possible to create difficult and therefore interesting problems by attempting to be more comprehensive. And sometimes there are unexpected rewards: in a situation where the study of two interacting entities is feasible but essentially simple, and the study of three virtually impossible, then by the introduction of new methods, the study of a large number becomes feasible again and interesting in a different kind of way. In classical physics, this was the transition from Newton to Boltzmann but it is relevant in other fields.

I would also argue that it is often worthwhile to explore unconventional levels of resolution, especially coarser scales which often coincide with a shift to comprehensiveness; and this also counters the inherent reductionism which pervades many styles of research.

My other prescriptions turn on attitudes to theory and method. A scrutiny of almost any field shows that it is subdivided into schools characterized by particular theories and methods. It would advocate theoretical and especially methodological eclecticism in relation to any particular research problem: the methods of different contemporary approaches often work more powerfully in combination. When different theoretical schools are based on different concepts, progress can often be made by forcing the two perspectives into one.

The argument so far consists of a rather generalized consciousness-raising. How can we relate it to more practical steps towards extending powers of imagination? First, it is important to understand the dynamics of one's own discipline. There may be an obvious progression, as in some quantitative subjects from description through statistics to mathematical methods. It is important not to be locked into a school which represents an earlier era. (Not that one would be short of problems: research would often be a series of difficulties which could be more easily resolved by new methods and insights.) The opposite danger is to be at the mercy of fashionable trends and to become a mere parrot. Adherence to fashion is anti-scientific and can be unproductive for the research student.

A second practical suggestion is to be deliberately connected to other disciplines and even other disciplines. Recognizing similarity of problems and approaches in different disciplines is to be receptive to the possible

relevance of new ideas. A kind of organized lateral thinking. This part of the argument has implications about reading. The new student will almost without exception be offered the literature of a narrow field. At some stage, of course, this will have to be tackled, but there is a danger that it will create a mental prison rather than as a springboard for new research. It may be better to read around the subject and to combine this with some first-principles thinking about the research topic.

This all has implications for the training of research students. There are echoes of the current policies of some research councils which require a broader training than has been common for the students they sponsor. But too often this takes the form of courses on methods, most of which seem irrelevant to any particular student. There is also some difference of objectives: the research councils want to make students more useful when they reach the wider world; I am arguing that a different kind of broader base would generate more imaginative research in the student's research period.

What is needed is not so much courses which offer in-depth training in methods which are unlikely to be used (for a PhD or later) but the awakening of an ability first to search for the variety of elements which might combine to produce a good approach to a problem and secondly to assemble and use the results of his search effectively. A postgraduate research course based on a series of case studies might be more effective than a traditional methods course. What is also important is to provide students with or at least encourage them to seek - a wide range of contacts beyond the department. The short inter-university courses offered by the Economic and Social Research Council to its sponsored students have turned out to be important in this respect - not so much for what is taught but to allow students from different universities to meet each other.

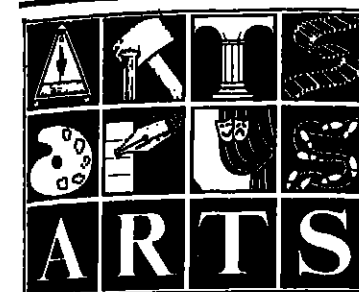
The argument has been cast, implicitly, in terms of the sciences and social sciences rather than the arts, through the notions of object of study or system of interest. But the same structures apply on both sides. For the arts research student, imagination is more likely to be a property of (say) authors being studied rather than the student's own work. The framework offered by literary criticism in recent years, for example, turns on the recognition that there are interesting theoretical questions at broader scales and that some concerns are shared with social scientists.

There has also been an implicit emphasis on analytical disciplines and the need to understand rather than synthesizing disciplines like planning or engineering where, ultimately, invention is the dominant task. This indicates perhaps how we give too much emphasis to analysis in thinking about research. One way of interpreting the argument offered here is to say that it is about the effective synthesis of ideas and methods whether for problems in analytical or synthesizing disciplines. The lesson is that the new and ambitious research student faces all the problems of an inventor: how to create something (for a particular purpose) which works, but out of almost nothing.

There is an argument for further development within the establishment itself. We have already noted moves towards a more broadly-based postgraduate education, though it is easier for research councils to extend departments than to offer specific guidance. The earlier conclusion needs to be emphasized: that this education should be more than a traditional methods course. But finally we should argue that research council needs to offer more guidance which would stimulate more imaginative research, difficult though this would be to do. It is necessary to move beyond a limited menu of high priority topics to display the rich variety of possible avenues of research which lie beyond conventional boundaries. Some organized brainstorming involving both committee members and the wider academic community would be a valuable start.

Alan Wilson

The author is professor of urban and regional geography at the University of Leeds.



Events

Continuing exhibitions:

To October 13. City Art Gallery, Plymouth. Peter Greenham RA: paintings and drawings.

To October 14. City Art Gallery, York. Henry Lamb: 58 works, including a series of studies of Lytton Strachey.

To October 20. Art Gallery, University of Nottingham. Prints by Monet. To October 21. Ferens Gallery, Hull. *Tril and Innocence*: Victorian paintings from the Ferens collection.

To October 29. Goethe Institut, London. *Dürer in Dublin*: engravings and woodcuts from the Chester Beatty Library, Dublin.

New exhibitions:

From today. Exhibition Gallery, Milton Keynes. *Semi-Detached*: pictures of people and places.

From October 8. Newcastle Polytechnic. Major exhibition of the works of Edward Munch. 115 works mainly from the last thirty years of Munch's life, never seen in this country before.

From October 9. Sainsbury Centre, University of East Anglia. *Trading Shapes*: Chinese and Islamic ceramics from the British Museum.

Concerts:

Tonight. Royal Northern College of Music, Manchester. Music from Sengul. October 5. Department of Music, University of Reading. Recital by Sharon Mabry (mezzo soprano) and Patricia Wade (piano): a programme of twentieth-century American music.

October 18. Turner Sims Hall, University of Southampton. The Brodsky Quartet: Haydn, Tippett, Janáček.

October 15. University of Warwick. Philip Mead (piano): Tippett and Beethoven.

October 18. University of Lancaster. Paul Tortelier (cello) accompanied by his daughter Maria de Pau.

October 21. Barnfield Theatre, University of Exeter. London Fortepiano Trio with Jan Schlapp (violin) in a programme of Mozart.

Other events:

October 1 to 28. The Birmingham Theatre Festival. Includes performances from five major British companies and visits from American and Dutch companies. Workshops with David Rudkin.

October 8 to 10. Arts Centre, University of Warwick. *Conrad's Heart of Darkness* adapted and performed by John Tordoff.

October 8 to 20. Sherrin Theatre Cardiff. New Vic Company presents *Under Milk Wood*.

October 8 to 13. The Marlowe, Canterbury. National Theatre production of *Shakespeare's A Midsummer Night's Dream*. The University of Kent on October 11 and 12 lunchtime performances of a platform portrait of Goldsmith by members of the *She Stoops to Conquer*. "Oliver Goldsmith: Citizen of the World".

October 12 and 13. Glynnie Wickham Theatre Company. Two women perform a "total theatre" presentation of life under apartheid.

October 15 to 16. Theatre, University of Essex. *Paines Plough* in Doug Lucie's new play *Key to the World*.

October 17 to 20. Arts Centre, Studio, University of Warwick. *Ashes* by David Rudkin.

'Master Class' director takes over the Nuffield

The Nuffield Theatre in Southampton has built its reputation upon a well-balanced dramatic diet, spiced with the unexpected. It's a recipe which has its audience coming back for more - but one which must pose a challenge to any new artistic director.

Justin Greene's first season at the Nuffield has just opened with his production of Steinbeck's *Of Mice and Men*. He took over from David Gill, who spent the summer planning the programme. He says there was absolutely no question of putting on simply the plays he ever wanted to direct. "The Nuffield audiences are very sophisticated," they like to think that



This still from the 1918 film *J'accuse* is from a new study of the films of Abel Gance by Norman King (BFI Publications, £12.00 and £5.95). King argues that recent ecstatic responses to Gance's reconstructed epic *Napoleon* (1927) have centred on the director's mastery of innovative techniques while overlooking the film's implicit political standpoint. The aim of his study, therefore, is to re-introduce the political in the discussion of the aesthetic value of Gance's films - indeed to show how Gance, as both reactionary and innovator, exposes limits to some current ideas about the politics of spectacle.

Sheer joy in the discipline of dance

Arifuku Kagura Company
Bloomsbury Theatre,
September 4-8

Kagura claims to be one of the oldest forms of dance theatre in Japan, rural in origin rather than courtly and urban like Noh and Kabuki. It is characterized more by exuberance than restraint: a basic dance movement is a wide turn of the body while the arms describe wave-like curves; and the speaking or singing voice is contained within a natural register. The lasting impression is of sheer joy in the discipline of dance rather than of the intensities that once experiences with Noh.

Kagura happily embraces sensationalism but without reliance on the sophisticated scenic realism of the Kabuki stage. Indeed the playing space as in Noh is of the simplest - a square backed by a single curtain behind which costumes or props are changed, while above it is suspended a grid the size of the stage from which hang myriad coloured paper cut-outs

(this is a seat from which the gods may observe the ritual). The sensational enters with the performer and is occasioned by the brilliance of his deployment of a mask, prop, costume or weapon and the brio of his expert execution of dance, mime or music. Even the ritual drumming is meticulously choreographed as a ballet for hands and drumsticks, the four players eagerly watching each other in their square formation to achieve a perfect symmetry of movement as their arms define arcs of varying diameters in the air or are arrested at a point of stillness.

The dance dramas tend to be either character-portrayals or narratives of mythical adventure. *Edisunai* is a dance to bring good fortune; as the god of luck is also the god of fishing, the ritual shows the genial deity in quest of a good catch. The mask is glossier, more highly coloured than those used in Noh (closer in style to western carnival and pantomime masks); it depicts a red-cheeked face, wrinkled with laughter and the early stages of

the dance deploy the hands, shoulders and chest to define through the mask a temperament in which jollity is all-consuming, the whole torso shaking convulsively. When the god goes fishing, mime joins forces with dance to demonstrate how carefully detailed observations of the niceties of angling - preparing the line, baiting the hook, casting, awaiting the catch, playing the fish and landing it - have been subsumed within the required patterns of dance. The ritual becomes a celebration of everyday human enterprise and dexterity: the god of joy is also the god of labour.

The mythical dramas are the most spectacular, especially *Orochi*, a tale about a god ending a tradition of sacrificing young girls to venomous serpents by drugging and killing the monsters. The snakes, six in all, were each played by a single dancer wearing a fanged mask and swathed around with some twenty feet of coils made from circles of bamboo linked by paper scales. The opening sacrifice in which the terrified girl was slowly enveloped

and consumed leaving the snake somnolent and engorged, the ensuing rout of the six serpents - a seething mass of fangs and entwining bodies - and the final battle in which the snakes seek to engulf and stifle the god before he can behead them, each episode registered horror and violence but kept these sensations at a remove by thrilling the audience with the beauty and acrobatic skills of the dancers. The stylization was of a different order from that of Noh or Kabuki, but aesthetically just as powerful.

Richard Allen Cave

Dr Cave is reader in drama at Bedford and Royal Holloway Colleges, London.

The Arifuku Kagura visit was the first event in the London Borough of Camden's World Arts Season. Between now and March music and dance from Senegal, Turkey, Bali, Tunisia, Bengal and Korea will follow at monthly intervals. Each group will give a day-long masterclass.

bread Man by David Wood providing a gilt-edged Christmas show for children.

The second half of the season begins with an office comedy, *Roll On Friday* by Roger Hall, author of *Middle Age Spread*, followed by another comedy, *Private Dick* by Roger Michell and Dick Mahler, which is a spoof on the Raymond Chandler stories. It is the last production in the season, however, which will probably prove the most exciting - Tom McGrath's *Animals* which received rave reviews at its Edinburgh Festival premiere, but as far as Justin Greene knows, has not been performed since.

Victoria Keir



Justin Greene

BOOKS

Out in the open

H. G. Wells in *Love*: postscript to an experiment in autobiography
 edited by G. P. Wells
 Faber, £8.95
 ISBN 0571 133290

"Who would read a novel if we were permitted to write biography — all out?" Wells's *Experiment in Autobiography*, from which these words are taken, is mainly concerned to analyse the formative experiences of childhood, adolescence, and young manhood. Not only is a veil drawn over his love affairs, but the last thirty years of his life are shown as a period of heroic public labours, the construction, as it were, of a triumphal arch through which mankind was to be driven on the road to Cosmopolis. Wells propounded his idea of a World State in novels, treatises, tracts, speeches, newspaper articles, and outlines of world history and economics. The fame that these brought led him, as he later wrote, to "Cerebration at Large and Brains in Key Positions" — the latter including not only British politicians and financiers but Theodore and Franklin Roosevelt, Lenin and Stalin. Fifty years ago, when the autobiography and its long-suppressed postscript were written, their author was a very big noise indeed.

The existence of H. G. Wells in *Love* has, until this year, been one of the most jealously-guarded of literary secrets. None of his biographers has even hinted at it. Wells knew that it must remain in manuscript for some years after his death, though doubtless he underestimated the longevity and stubbornness of those able and willing to block publication. (Even now, the names of two of his mistresses have been suppressed.) In the long run he believed it would help to insure him against posthumous misrepresentation. He left directions for it to be bound together with *Experiment in Autobiography* and with his memoir of his second wife published in *The Book of Catherine Wells* (1928) "so that all the main masses of my experiences and reactions will fall into perspective". G. P. Wells and Faber (who are concurrently reissuing the autobiography) have come as near as is

practicable to meeting these wishes. The postscript makes a genuine sequel to what was already one of the classic modern autobiographies. The earlier volumes began by exploring the Jungian concept of the *persona*. H. G. Wells in *Love* begins with another popularized Jungian concept, the "lover-shadow". *Persuasion* and lover-shadow are the hero and heroine of the drama of individual self-consciousness. Wells's unrelenting pursuit of his lover-shadow, or ideal sexual partner, was the result (he argues) not of an oversexed nature but of the exceptional freedom he enjoyed as a successful writer. Unlike most other professional men he was largely able to do what he pleased, with a constant succession of willing partners.

Wells was in no sense an epicure or passive consumer of sex. His thirst was for human (female) contact. Sensual enjoyment, he found, came best in a context of friendship and also of financial patronage — so that his love story is in some ways less that of the typical writer than of the typical plutocrat. Gifts, annuities, settlements and usufructs were very much part of his armoury. On occasion these might

be vindictively withdrawn, but several of the women who had formerly patronized him ended up as his pensioners. The theme of his autobiography is the tension between his belief in a managed world and his struggles to control the turbulence of his personal life. Money, sentiment, and his tendency to view each relationship as bounded by an unwritten treaty or contract were crucial aspects of his technique of management.

Wells is unrepentant about his sexual irregularities — "They were amusing and refreshing, and I wish there had been more of them". Nevertheless, his main extramarital love affairs were all spectacular failures. The story of his relations with women, he concedes, "is mainly a story of greed, foolishness and great expectation, and it would not be worth the telling if it were merely my particular story". Wells's warmth, his resilience, and his dazzling ability to forestall (though not necessarily to disarm) criticism are all in evidence in this apologia. It will confirm his admirers in their admiration, and also, no doubt, his detractors in their detraction.

Do we, then, now have Wells's

autobiography — all out? After meeting Teddy Roosevelt in 1906 in the White House, his immediate reaction, we now learn, was to spend the rest of the afternoon in a "coon house". His disillusionment with Stalin's Russia ("I lament the drift of this great land towards a new system of falsity as a lover might lament estrangement from his mistress") expressed at the end of *Experiment in Autobiography* was much sharpened by the misery of estrangement from his actual Russian mistress, Moura Budberg, Moura, the devoted companion of his old age, never told him her innermost secrets, or if she did he could not bring himself to commit them to paper. The likeliest explanation of her duplicity (revealed to Wells in 1934 by some chance remarks in Moscow) is that she was a long-standing Soviet agent. Wells's obsession with Moura's shortcomings, and his recriminations with his previous mistress Odette Keun, threaten to unbalance H. G. Wells in *Love*. The accounts of Ambler Reeves and Rebecca West, by contrast, are mellowed by distance so that even this most candid of autobiographies bears the traces of forgiveness — and forgetfulness.

The original version of *Experiment in Autobiography* was finished in a "friendly and peaceful house beside a little lake in Estonia". That house, we must now believe, was the scene — in his sixty-eighth year — of the worst emotional crisis of his life. Later chapters of the postscript, some of them in diary form, show how a *modus vivendi* with Moura was re-established. The final section, telling of his own death, was left for his eldest son to complete. This remarkable addition to the Wellsian canon owes much to its tactful and self-effacing editor, Professor G. P. Wells, who collaborated with his father on *The Science of Life* (1930) and accompanied him on his late trip to Moscow. One of the heartening features of Wells's very old age was the growing affection he felt for his immediate family. Professor Wells, now in his eighties, has once again shown how much more fortunately placed this was than some of "HG's" other affections.

Patrick Parrinder

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Romantic versions of Eden

Creature and Creator: myth-making and English Romanticism
 by Paul A. Cantor
 Cambridge University Press, £19.50
 ISBN 0521 258316

The "creation myths" fashioned by several of the Romantics were attempts to rewrite *Paradise Lost*. Where Milton had seen a perfect world marred by man's lapse, they saw an imperfect world waiting for men to redeem it. Where he upheld divine law, they explored human potentialities; and disobedience, or resistance to the established order, they saw not as sin but as virtue.

In forging their new myths they drew on the legend of Prometheus, on the traditions of the Gnostics (who believed the world had been made by Satan rather than God), and on the teachings of Rousseau. Of special significance was his *Second Discourse*, which describes the peaceable and happy lives of men before the coming of civilization. But this Eden had been inhabited by sub-humans, as Rousseau's notes make clear, and to return to it was neither feasible nor desirable. The second Eden sought by the Romantics would combine the freedom and harmony of the primitive state with the dignity and culture of the civilized.

In the light of these ideas Professor Cantor discusses Blake's *The Book of Urizen*, and *The Four Zoas*, Shelley's *Prometheus Unbound*, and *The Triumph of Life*. Mary Shelley's *Frankenstein*, Byron's *Cain*, and Keats's *Hyperion* poems. He writes clearly and unpretentiously and has interesting things to say, particularly about the influence of Rousseau —

inescapable, of course, but still remarkable in the case of Blake, who mistook Rousseau and denounced him accordingly. Dr Cantor's best chapter is on *Frankenstein*, where, as he shows, patterns of creature and creator mirror and enclose one another. The general movement he discerns is one towards greater pluralism and greater pessimism. The later myths express a fallen state that is unexplained and perhaps unredemptable, anticipating existentialist attitudes.

However, the value of any such conclusion about "the long Romantic struggle to overcome the antinomies in human existence" is limited by the twenty-year gap in Dr Cantor's account of it. From Blake he proceeds directly to discuss six works produced between 1818 and 1822: Wordsworth (whose *Paradise Lost* was *The Prelude*, as J. R. Watson has pointed out) and Coleridge (whose relevance is obvious) are omitted, perhaps because their conservative versions of creation and fall would not fit the useful poem.

However, limitations are a certain naivety of method ("The agony Keats endures in trying to ascend the steps resembles Apollo's struggle") and perhaps some insensitiveness to the quality of what is being discussed. Dr Cantor does not seem to notice the power of the last part of *Prometheus Unbound*, or the apparent lack of it in *Cain*. Such matters can affect interpretation as well as evaluation. To Cain Dr Cantor awards considerable status, as a metaphysical rebel with whom Byron "identified deeply". But Byron's text gives us a childish grumbler, whose self-centredness reaches almost comic heights in the last speeches of the play. Should it be taken for granted that a poet now well into *Don Juan* could not distance himself adequately from such figure?

Derek Roper

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Papering over the cracks

The Collected Letters of Katherine Mansfield
 volume one: 1903-1917
 edited by Vincent O'Sullivan and Margaret Scott
 Oxford University Press, £15.00
 ISBN 0198126131

When Katherine Mansfield's *Journal* first appeared in 1927, Lytton Strachey confessed, "why that foul-mouthed, virulent, brazen-faced broomstick of a creature should have got herself up as a pad of rose-scented cotton wool is beyond me". It was apparent to most of Mansfield's friends that the complexities of her character would easily encompass the extremes sketched by Strachey. Her lifelong friend Ida Baker told Miron Grindin in 1965 that "she was like a lantern with many windows — not octagonal, but centagonal. Each friend had his or her window and K. gave generously, gave all to each one, of her light, through that window".

The reasons behind Katherine Mansfield's adoption of many masks become clearer as we read this first volume of the collected edition of her letters. These give a fuller picture than we have yet had of the young Mansfield, especially Mansfield as she was before she met Middleton Murry, who played a kind of Willy to her Colette, editing her letters and journal after her death to suit not only his picture of Mansfield, but perhaps more importantly his image of himself. In her early letters to her family and to Garnet



H. G. Wells

Trowell, Mansfield is revealed in all her awkwardness as a girl almost solemnly and portentously dedicated to Art, yet hampered enormously by her sex and her bourgeois-colonial background. The masks she became adept at producing were necessary to paper over those very cracks and disjunctions — between "the artist" and "the woman", between the cosmopolitan and the "little colonial" — which would fuel her later writing.

As the editors make generously clear, most of the letters included in this volume have been available to students of KM for some while in the pages of, for example, Miron Grindin's *Adam International Review*. The achievement of this collected, annotated edition is to place her on the intellectual and artistic map of her time. As we read the previously dispersed letters to Virginia Woolf, Ottoline Morrell and Bertrand Russell we are able to reconstruct Mansfield's intellectual life, and in the context of these letters, with their familiar references to contemporary work by Virginia Woolf and T. S. Eliot, critics may be readier to concede the importance and status of Mansfield as a modernist writer. (In Mansfield's work symbolist poetic techniques are adapted to, and in a sense concealed within, an apparently realistic prose narrative surface: the parallel with the stories of Joyce's *Dubliners* is close.)

For this edition the letters have been freshly transferred from difficult manuscript originals, a job most scrupulously done. Whether the editorial decision to reproduce all the "amusing idiosyncrasies" of KM's hand would have won her approval is another question, and one which it seems legitimate to raise when considering letters written with at least one eye to publication. In general, the annotation in this volume is helpful and thorough; particularly in giving us early biographical detail and clearing up points which would otherwise be obscure for

the non-New Zealander. In other areas the editing can be patchy: it is odd, for example, to have a glowing reference to "The Love Song of J. Alfred Prufrock" laboured in the notes, while elsewhere direct quotation from Arthur Symonds and Mallarmé goes unremarked.

No edition of Mansfield's letters can be anything like complete, as the editors again acknowledge: many letters were destroyed in her lifetime at her request. One of the most tantalizing omissions is that of the letters written to Beatrice Hastings between 1910 and 1917. Beatrice Hastings was the ardent feminist who helped KM during the difficult period when she had a miscarriage and possibly a subsequent abortion. The letters to Hastings might have given a clue to the woman whose suppression Mansfield laments in a 1915 letter to Murry: "I'm not a girl — I'm a woman. I want things. Shall I ever have them? ... all this love and joy that fight for outlet — and all this life drying up, like milk in an old breast". As it was, Hastings offered her papers to the British Museum in 1943, but that institution declined to take them, and only weeks later Hastings destroyed the papers and committed suicide.

This loss could be read as emblematic of the way in which the real woman "Katherine Mansfield" has come to be written out of literary culture. Perhaps she would wish this to be the case: certainly she is, in her own words, among the least "yearning and sentimental" of writers; and in these letters as in her stories it is her bravery, wit and boldness which we admire as much as the conventionally feminine "sensitive mind".

Clare Hanson

Dr Hanson is lecturer in English at the College of St Paul and St Mary, Cheltenham.

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EDUCATION

Levels of authority

The Higher Education System: academic organization in cross-national perspective
 by Burton R. Clark
 University of California Press, £19.95
 ISBN 0520 04841 5

Despite its prolific literature higher education as a field of interest in its own right has not attracted its share of major intellectual contributions. Much of the work is ephemeral, dealing narrowly with current problems, in collections of essays variously useful, or in works by practitioners written chiefly for other practitioners. Books which open up new approaches to the subject are rare.

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Clark, now professor of education at the University of California, writes from the perspective of sociology and organizational behaviour and in consequence his mode of thinking can appear unnecessarily abstract to many not accustomed to these disciplines. In practice his grasp of detail and his understanding of the historical context is secure and his bibliography is a treasure trove of little known material.

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Moreover he writes in an attractive and informal style which carries the reader through sections which could easily have been clogged with jargon. His approach to describing how higher education is organized and governed is often oblique but the book itself is carefully structured along a series of closely defined themes.

He begins at the bottom of the pyramid by discussing "Knowledge" and the way in which the majority of higher education systems are "bottom heavy", the fundamental organization of the system being based on "bundles of knowledge" which over time have fragmented into a variety of disciplines and specialties. Unlike firms or governmental bodies the character of higher education systems is formed by the way knowledge is organized at the basic unit level and by the dynamics and interactions of disciplines and subjects. This emphasis on the organization of higher education being "knowledge-centred" is one which in Britain we feel instinctively uncomfortable with. We prefer to look at our own system much more in terms of top-down structures than bottom-up. The strength of Clark's approach is that he forces one to look at the system his way and convinces by drawing comparatively on developments in a variety of national systems.

In the second chapter, "Work", he shows, for example, how the single-chair system in France and Italy provokes a different internal structure to the more collegial multi-professional departments in the US or Britain, and how, in some systems, subjects like medicine, engineering, or even the natural sciences, by resisting open access while other disciplines have encouraged it, have shaped their institutions and systems. He goes on to describe how interdependence between subjects is expressed in different ways. In European and Latin American countries chairs come together in self-protective organizational groupings so that faculties become self-contained units often on disparate sites, while the university itself is no more than the bureaucratic glue which keeps the enterprise together.

Thus the biennially elected rector of the typical European university derives his lack of power from the medieval tradition of strong faculties incorporating a collection of semi-autonomous chair organizations, while the powerful centralized bureaucracies of the US university mirror the way in America the major arts and sciences have grouped themselves together in schools or colleges of arts and science with advanced study taking place in



Children in the play area of St Thomas Becket School in Cheetham Hill, Manchester. The picture shows the school's geodesic hall. Taken from *Educational Development and School Building 1945-73: aspects of public policy* by Stuart Maclure, published yesterday by Longman at £14.95.

separately organized graduate schools. Beyond and above the individual institution national systems may be divided on sectoral lines between single and binary sector countries like Sweden and Britain or multi-sector, public and private, community college and multi-campus system in the US, and on hierarchical lines as in France or Japan where particular institutions are accorded a pre-eminent role.

At a time when Britain is engaged in a profound debate about future higher education structures the chapters on "Authority", "Integration" and "Change" are particularly interesting. In the first Clark describes six levels of authority stretching from the chair department to the national decision-making body and examines the extent to which "problems may slide up and slip down the levels in search of those who can decide". He compares the different types of authority at discipline, institution and system level, showing how the characteristics of the various national patterns serve to distribute decision-making powers in different ways.

The chapter on "Integration" throws up some of the most pertinent comments for the British debate. Clark describes how the various national patterns approximate to one or two of three simplified models: one professional, the state and the market-run systems. The British pattern, with its academic predominance on the University Grants Committee and the research councils, he sees falling very much into the professional category. One of his most uncomfortable judgments is that: "to the extent that the state system is guided (ie academically managed) its apparatus will be so organized that aggressive planning and direction will be impossible". State direction will be impossible, he claims, because the other hand can be control on the other hand can be decentering and restrictive and his clear preference is for a more market-oriented mode.

Integration and coordination can constrain initiative without providing compensating increases in direction. Of the various approaches he identifies — the bureaucratic, the political, the professional and the market — Clark clearly inclines towards the market and fears most the bureaucratic whose grim consequences he describes as follows:

"Layering" stretches the administrative superstructure vertically; jurisdictional expansion thickens it horizontally; personnel enlargement fills it with more people; administrative specialists with more ex-

perts; and rule expansion ensures that the larger better manned structure will have a commensurate massive body of regulations. These processes separately and together increase the coordinating influence of bureaucrats. As a result administrative officials in central committees, commissions and councils as well as in ministries and offices of education become more and more implicated in the forming and implementing of policy.

As higher education systems are driven from outside to modernize, become more efficient and plan, they seem inevitably to move from "benign to assertive bureaucracy". The more bureaucratic a system, the more layered its command structure, the more rigid it becomes and the more resistant to change. Single authorities he concludes are less effective at running higher education systems and plurality is to be preferred because it encourages greater diversity. The central task for coordinators is to "anchor different roles for different institutions and groups in the system". In these circumstances: "The appropriate role for statesmen in higher education systems is to create and maintain frameworks that encourage constituents to generate changes that are creatively adaptive to a myriad of local contexts and are, in the aggregate, diversifying".

This will be an influential book and will set new trends of thinking in higher education. Clark's influence can be clearly seen for example in some aspects of the Leverhulme study to which he was an active contributor. A British reader, after noting his condemnation of the "home town" view of higher education, might wonder whether his preferred market-led system does not rather closely approximate to California, or whether he does not underestimate at times the extent to which all the European systems are more intricately linked to a matrix of individual national political and cultural characteristics than the newer countries like the US, Australia or even the USSR, but these are matters of emphasis only. They do not invalidate the conclusion that this book deserves to become required reading for higher education policy-makers at all levels and for scholars generally in the field.

M. L. Shattock

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The annual pronouncements of the great gastronomic guides are awaited with apprehension in the restaurant world. Getting a lower score of *toques* on the Gault Millau scale can be a personal tragedy for a top chef. *The Good University Guide* has no corresponding all-embracing symbol to alarm admissions tutors—each institution is not given a score in mortar boards. So it is good news that in this up-date of a series of articles which appeared in the *Sunday Times* in 1983 the analogy is not pushed far beyond the fact that gastronomy and entry to higher education both generate a desire for information, and that supplying it is a profitable business. Peter Wilby goes out of his way to emphasize that there are no "best buys" in universities, polytechnics or colleges. "The best course is the course that is best for you." Choosing this course is for most people inescapably difficult since it has to be based on more and more complex information.

The figures which the book provides make it possible to compare such features as the number of hours the libraries are open, the number of

books per student and students per seat; the range of sporting facilities; the number of halls of residence, their charges and whether they are mixed, single-sex, self-catering; the proportion of firsts and upper seconds awarded; the number of applications per place and the average A level score. All this is based on questionnaires answered by the institutions themselves and presumably reasonably accurate as far as it goes. But blanket statistics conceal all kinds of finer considerations which may be the ones that are the most telling. This is particularly so with popularity ratings, the point at which institutions were most inclined to draw the line in their cooperation. It is not difficult to understand a reluctance to see reputations established, and probably perpetuated, on the basis of ambiguous criteria.

To put flesh on the bones of the statistics there is a chatty pen portrait of each major institution. Here and there the flesh bulges unexpectedly, some unrepresentative sources of information—there are various gratuitous comments which will not go down well in the places to which they refer. This knockabout aside however, the serious problem is that the resulting identikit pictures do not really provide enough to enable applicants to examine in any detail the courses that interest them. There is no substitute for the individual prospectuses but the guide will help to dispel some of the bewilderment at being faced with a vast array of them.

In fact it is as the preliminary step in the whole entrance process that the book is best regarded, and to his credit Wilby does not pretend otherwise. He describes the application procedure with admirable clarity and wit, and his explanation makes valuable reading for anyone who was unaware of the importance of having a strategy for choosing which courses to apply for. He also gives advice on how to work up

an interview technique. If sales are good admission tutors can in future expect growing numbers of applicants who start with a relaxed (but conversational) greeting and firm handshake, maintain eye contact, don't pick their noses, declare that they would love to read more if only A level cramming were not so time-consuming and casually let slip the ways in which they are underprivileged. And if anyone asks whether there is a coffee machine in the department, he or she has certainly not read *The Sunday Times Guide*.

The most delicate issue is the conditional offer, with Wilby joining the ranks of those attempting to give guidance on the levels at which these are made by individual departments. Again his explanation of how to interpret the past tense is clear and helpful, but there is the sneaking suspicion that a good many readers will go straight to the chart without bothering about the explanation. It is here that the trouble begins. Of the offers listed for each university department "all are accurate for 1983, most for 1984; some have been confirmed or revised for 1985 entry". It is true that a growing number of institutions are making this kind of information available, but some predictions are sure to be wrong because the problem of keeping to admissions targets makes it impossible to have a cut and dried policy which can be tabulated in this way. I am sure that a rough guide of this kind is better than nothing but I would not expect all admissions tutors to agree. Perhaps each page should carry a governmental warning that offer charts can damage the health of your entry prospects.

Arthur Hearnden

Arthur Hearnden is secretary to the Standing Conference on University Entrance.

Figures of speech

Metaphors of Education
edited by William Taylor
Heinemann Educational, £5.95
ISBN 0 435 80880 X

If there is a target for this collection of essays, it is contemporary western man and the positivist philosophical tradition which meshes in with his values and culture. Metaphor may seem an unlikely weapon with which to launch such an attack, but certain metaphors have been extremely influential in shaping attitudes and approaches to education in the past, while new metaphors are emerging now which rally points for the cold warriors of contemporary educational conflicts.

Two metaphors in particular stand out in the history of educational thought: that of the cave in Plato's *Republic* and that of the plant expressed in the Froebelian term "Kindergarten". These metaphors symbolize the perennial vacillation between two currents of thought in education. The first of these, implicit in the Platonic metaphor of struggle from cavernous darkness to daylight, is the conception of education as the pursuit of knowledge and truth—a transition achieved through a self-denying process of engagement with what is outside ourselves, an external reality which imposes its own shape and structure on our efforts. The second is the belief conveyed by the metaphor of the child as plant that the teacher's main function must be to aid the natural process of development, standing aside, avoiding destructive interference and supplying no more than the nourishment needed for the child's natural and inevitable flowering—in Jean-Jacques Rousseau's phrase, not to save time but to waste it.

Some of the contributors to this book engage with these historic metaphors and a number of them discuss the metaphors in their contemporary form: the first as the metaphor of "initiation" favoured by present-day conservatives and traditionalists; the second as the metaphor of "growth" common to most progressives. But are today's debates to be conducted in terms of yesterday's metaphors? If not, what are the emerging metaphors for today? R.K. Elliott implies in the educational writings of Antonio Gramsci, although perhaps

his newness could be challenged given the biblical assertion "You shall know the truth and the truth will make you free". New or not, there is a liberationist current in many recent writings from the radical left on education and this notion does provide an effective contrast to the education for conformity model which may be derived from some of the metaphors of the right.

Among these must be included the "scientific" metaphors discussed by several contributors. Does talk of behavioural objectives, for example, pull in its wake the whole ideology of Skinnerian behaviourism and a narrow and mechanistic view of man? Denis Lawton argues that it does. But so too, does the radical metaphor of education as cultural reproduction.

But how important for educational practice is metaphor—the most abstract of concepts—and the language in which it is embedded? The point of this book is to suggest that both are extremely important. The notion that the world is not simply presented to us in observation and experience but that

we impose, through the language we use, our own structure upon it has become perhaps the most influential doctrine of the day. That this includes political and educational structures is brought out most clearly in the closing contribution from Raymond Wilson. Wilson finds in R.M. Ballentyne's *Coral Island* and William Golding's *Lord of the Flies* two highly significant metaphors of the human condition: the first expressing an optimistic and fundamentally naive view of human nature, the second a pessimistic perspective soured by the corrupting influence of twentieth-century experience.

This is not transparently a book written with a sense of purpose. Nevertheless, the composite picture it presents of dissatisfaction with prevailing approaches to culture, to values and to education deserves reflective consideration.

Brenda Cohen

Brenda Cohen is lecturer in philosophy at the University of Surrey.

Teaching methods

A Teacher's Guide to the Psychology of Learning
by Michael J. A. Howe
Blackwell, £15.00 and £4.95
ISBN 0 631 13577 4 and 135782
Positive Teaching:
the behavioural approach
by Kevin Wheldall and Frank Merrett
Allen & Unwin, £12.00 and £5.50
ISBN 0 04 370150 7 and 370151 5

The two questions of most professional concern to teachers are how to help children learn lesson content and how to cope with the problem behaviours they sometimes present. Although both these books tackle these questions, the first is concerned mainly with the learning of lesson content, whereas the second focuses more on behaviour problems.

Howe's work at the University of Exeter on the psychology of learning has gained a high reputation, and his very readable introduction to those aspects of his work (and of the work of other researchers) most relevant to the classroom teacher, such as the nature and causes of school leavers, the transition from home-based to school-based learning, and the learning of specific

skills like comprehension and written communication. Research into the influence on learning of memory, intellect, maturation, genetics and mental abilities is also discussed, and the implications of this research for the job of the teacher summarized.

Here the non-psychologist is in for a pleasant surprise. Psychological research into learning is not concerned these days primarily with experiments on animals or with experiments on people carried out within the artificial environment of the psychological laboratory. Much of it is practical, classroom-based, and geared specifically towards helping the teacher operate more effectively. For example, research shows that the ability to retain visual information can sometimes be increased up to tenfold if the learner is told in advance that the information that he will be asked to form a visual image of it when it is taken away. Similarly, other research shows that language-based materials are retained more efficiently if the learner is asked to analyse their meaning while studying them.

There is also evidence that retarded learners often fail simply because no one has taught them the learning strategies which quicker students use as a matter of course, and that the teaching of clearly identifiable skills can close the gap between the ability to communicate in the spoken language (usually good in most children) and the ability to communicate in the written

continued on p. 10

BOOKS

EDUCATION

The study of English

Changing English: essays for Harold

Edited by Margaret Meek and Jane Hinchman
Harcourt Educational, £6.95
ISBN 0 435 80882 6

This is a collection of pieces in honour of the recently retired Professor Harold Rosen, an influential and popular teacher in the University of London Institute of Education. Teachers operate at a sensitive place in society, and those who prepare teachers for their work at an even more delicate and significant one.

In question, however, whether the admirable motive of saluting a well-liked colleague constitutes in itself a sufficiently strong unifying force to make a set of separate contributions a coherent whole. It hardly does so. The contributors include colleagues and pupils, Rosen's former and present wives, his younger son and other friends. The theoretical background derives from Saussure's social theory of language and Raymond Williams' educational writings. There are other influences such as that rightly announced by one of the editors in the introduction. "These essays demonstrate how language is, for the teachers as well as the students, the essential zone of proximal development as described by Vygotsky".

Primary issues

Understanding the Primary Curriculum

by John Boyd
Hutchinson, £9.95 and £4.95
ISBN 0 09 156880 0 and 156881 9

The major events affecting primary education in the past ten years have highlighted the crucial importance of the curriculum in determining the quality of the educational experience of young children.

The Plowden Report (1967), which many teachers look back upon nostalgically, advocated pluralism in education, child-centredness as a philosophy for teaching and learning, and the autonomy of the teacher in deciding both the ends and the means of the educational process. The report gave

much less attention to the curriculum than to questions of school and class organization and teaching style. The seventies saw an increasing challenge to the Plowden "orthodoxy" although the studies of the Observational, Research and Classroom Learning Evaluation project (ORACLE) have shown that this orthodoxy never really penetrated far into the classroom. Thus recent years have seen a swing away from individualism and diversity in primary education towards more concern with unity and evaluation. The results of the William Tyndale affair, the establishment of the Assessment of Performance Unit, the "Great Debate" and the 1978 Primary Survey can all be seen as part of this trend.

The content, scope, consistency and assessment of the primary curriculum are now major issues and even the long cherished generalist role for the primary teacher is now questioned as Her Majesty's Inspectorate and others advocate more specialist teaching for primary age children. Increased public accountability of teachers appears to

and to the giving or withholding of classroom rewards (teacher attention and praise, privileges, marks, house points) can quickly alter child behaviours in a desired direction. Behaviours touched on include chattering, forgetfulness, untidiness, bad temper tantrums, and many others.

The implication behind much of what is said is that teachers often fail to control children primarily because they have never been taught to analyse the positive and negative effects of their own behaviour upon the class, or to be systematic in their observation of children and in the manipulation of the incentives at their disposal. Wheldall and Merrett attempt to remedy this situation by explaining, clearly and cogently, the behavioural approach to classroom management, and the strategies for exploring and modifying children's actions that it has produced. Tables and graphs demonstrate the success of such strategies in reducing the incidence of unwanted child behaviours, and a useful flow diagram shows how to go about applying those strategies.

Together with Howe's book, *Positive Teaching* should prove a welcome addition to any teacher's bookshelf.

David Fontana

David Fontana is senior lecturer in educational psychology at University College, Cardiff.

There are other gulp-producing pronouncements scattered through the volume. But, thank goodness, the collection does not illustrate other topics. Some, it is true, are products of the educational Zeitgeist like our historically inept or unjust grammar of gender, or our lack of recognition and response to a "children's culture", or Tony Burgess's treatment of language lived in history and the inadequacy of approaches dependent on the abstracting of language from cultural processes. Tony Burgess—the first person, he tells us, to do A level English at Winchester—argues that the social theory of the sign, developed in post-revolutionary Russian thought and refined by Michel Foucault, offers for English teaching an important extension to a unified theory of language and literature.

A less abstract and decidedly more appealing engagement with the social and cultural process is seen in Margaret Meek's study "Speaking of Shifters".

The general meaning of the grammatical form called a shifter is characterized by a reference back to the given speech act that uses this form. Thus the past tense is a shifter because it literally designates one event that precedes the given act of speech.

She uses this idea of Roman Jakobson with point and subtlety and a nicely human touch to look at children's notions of time in their own oral narratives and in stories written for them. "My heart warms" she says, "to the child who told Plagiat that bigger things are older than smaller things, and things that have stopped growing have stopped getting older". This piece makes one feel that one is listening to a pedagogical Walter de la Mare.

William Walsh

William Walsh is emeritus professor of commonwealth literature at the University of Leeds.

have brought about an end to the notion of the curriculum as a "secret garden". A book which would help primary teachers understand the nature of these changes and to see the way ahead would indeed be "timely" as the publisher's blurb describes John Boyd's book. Unfortunately this one will do little to clarify the issues for teachers, nor does it offer much in terms of a practical way forward.

It is an unsatisfactory book on several counts. It is difficult to detect any originality, structure, theme or thesis to the narrative. Chapter follows chapter with little apparent connection, and indeed the reader has to wait until chapter five to learn that the author believes "that questions about the content of the primary curriculum and curriculum development need to aim at improving the status quo rather than attempt radical innovation".

He does concede that there are certain curricular "issues" present in primary education—children with special educational needs, ethnic differences, gender, the demands of new technology, the standards debate and accountability in education, but these are all dealt with sketchily and are bundled together in one chapter offering few practical suggestions as to how schools might deal with them.

Mr Boyd is similarly lax with the terminology he uses. For example, nowhere does he define exactly what he means by "curriculum", a term that can have radically different connotations to different people; and in the chapter on primary school "ideologies" we are told about only one—child-centredness—which is conceded that "although it is seen as 'child-centredness' is rarely reflected in classroom practice rather reflects it". Child-centredness is one of the few things that Mr Boyd ventures comment upon, seeing it as an obstruction to organization and efficiency. He sets up other paper tigers to attack; curriculum planning by behavioural objectives and local authority inspired self-evaluation schemes are denigrated as though no alternatives exist.

It is difficult to detect for whom the book is intended. Teachers will find the lack of pragmatic discussion frustrating and leading teachers will be confused by the knowledge that Mr Boyd assumes for them. This is a disappointing book which has wasted an opportunity to provide an insight into an educational topic of increasing complexity.

L. A. Rodger

L. A. Rodger is lecturer in education at the University of Durham.

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Further details and application forms may be obtained from the Registrar, Manchester Polytechnic. Closing date 15 October 1984.

MANCHESTER POLYTECHNIC

Senior Lectureship in Economics

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Join the Polytechnic at the centre of the hypertechnic

Bristol and its environs is fast being recognised as one of Europe's major high technology growth areas - with many international names now investing heavily in the region. At the centre of this area lies Bristol Polytechnic which, during the next few years, expects to make a major contribution towards the development of computer aided engineering in the City.

With this aim in mind, the Department of Engineering is currently integrating its academic planning with that of two other Departments, Science and Computer Studies and Mathematics, and is shortly to move into a new purpose-designed building under the direction of a new Head of Department. The following appointments will have a major influence on the future development of the Polytechnic as an industrial research consultancy:

Associate Head
£15,390 - £17,091 p.a.
(Ref. L/91)

Reader
£12,519 - £15,744 p.a.
(Ref. L/92)

If you have a blend of academic and industrial experience, coupled to proven creative and innovative skills, we'd like to meet you. For further details and an application form please contact the Personnel Office, Bristol. Telephone (0272) 656261, extension 216 or 217. Closing date 12 October 1984.

Bristol Polytechnic 



ROBERT GORDON'S INSTITUTE OF TECHNOLOGY, ABERDEEN

HEAD OF SCHOOL OF PHYSICS

Suitably qualified and experienced persons are invited to apply for this post arising from the retirement of the present holder in April, 1985.

Salary £19,491 per annum (annual review). Removal expenses assistance.

Details from Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen, AB9 1FR. (0224 833611).



PAISLEY COLLEGE

A Scottish Central Institution

LECTURESHIP IN MANUFACTURING SYSTEMS

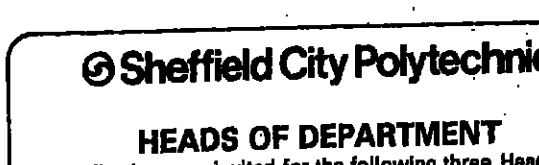
This post has been created to support the rapid expansion of computer aided manufacturing in the Department of Manufacturing Engineering.

Applicants should have experience of the application of computers to manufacturing processes and the control of production systems. The successful candidate will be expected to develop research and co-operate with industry in the field of computer aided manufacturing.

The successful applicant will join an existing team who are concerned with the application of computers to the manufacturing system.

Salary Scale - Lecturer: £15,390 - £17,091 p.a.

Application forms and further particulars may be obtained from The Personnel Office, Paisley College of Technology, High St, Paisley PA1 2BE (Tel. No. 041 897 1241 Ext. 230). Informal enquiries may be made to Dr C Chisholm, Associate Head of Department, Ext. 257.



Sheffield City Polytechnic

HEADS OF DEPARTMENT

Applications are invited for the following three Heads of Department posts:

BIOLOGICAL SCIENCES

MATHEMATICS

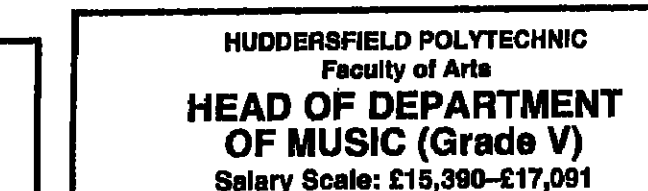
URBAN AND REGIONAL STUDIES

Salary scale: Burnham HOD Grade VI. Currently £16832-£18327.

Applicants should have appropriate academic and professional qualifications, and substantial experience in their area of study.

Application forms can be obtained from the personnel officer (Dept. THEB) Sheffield City Polytechnic, Halfords House, Fitzalan Square, Sheffield S1 2BB or by telephoning 0742-20011. Ext. 2387. Closing date 12 October.

Sheffield City Polytechnic is an Equal Opportunities Employer.



HUDDERSFIELD POLYTECHNIC

Faculty of Arts

HEAD OF DEPARTMENT OF MUSIC (Grade V)

Salary Scale: £15,390 - £17,091 (salary award pending). Ref: ACA525

Required to commence at the earliest possible date. Candidates should have qualifications and reputation in one or more of the following fields: performance, composition and the history of music, including, preferably, a record of research and publications; and experience in academic leadership. The title of Professor may be conferred on a suitably distinguished appointee.

Application forms (to be returned by 19th October 1984) and further details from The Personnel Dept, The Polytechnic, Queensgate, Huddersfield HD1 5DH.

City of Birmingham Polytechnic

Faculty of Business Studies and Law

HALF POST L1/L2 IN COMPUTER APPLICATIONS

A vacancy exists for a well qualified person to contribute to the development of the business studies and law courses. The successful candidate will be expected to contribute to the development of the business studies and law courses.

Applicants should be graduates with appropriate academic and professional qualifications, and substantial experience in their area of study.

Application forms can be obtained from the personnel officer (Dept. THEB) Sheffield City Polytechnic, Halfords House, Fitzalan Square, Sheffield S1 2BB or by telephoning 0742-20011. Ext. 2387. Closing date 12 October.

Further details and application forms may be obtained from the Registrar, City of Birmingham Polytechnic. Closing date 15 October 1984.

Polytechnics continued

Postgraduate Certificate in Education: Music (CNA)

One year full-time

Lively and able musicians intending to specialise as Class or Instrumental music teachers in secondary schools should apply now to start in October 1985 on this recently validated and innovative course. Graduate status or equivalent necessary.

Further information: Admissions Enquiries (tel 0855), Middlesex Polytechnic, 114 Chase Side, London N14 5PN. Telephone 01-855 6559 (24 hours).

For application forms apply to: The Graduate Teacher Training Registry, 3 Crawford Place, London WC1H 2BN.

Middlesex Polytechnic

Polytechnic of the South Bank
PROJECTMANAGER
GREATER LONDON AREA
WAR RISKS STUDY

(Ref: ADM45)
The Polytechnic has been awarded a research grant by the Greater London Council to examine the nature and effects of a possible hostile attack on the Greater London Area and the efficiency and effectiveness of possible civil defence measures.

The study will be executed by a distinguished Commission of International experts under whose direction of research will be commissioning. In order to support the Commission, the Polytechnic now seeks to appoint a Project Manager for a period of 18 months with possible extension to two years.

The post will be paid on a full-time basis at a rate of £15,401 (inclusive) according to the criteria of the selected applicant. The successful candidate will be responsible for the overall management of the project, including the selection and supervision of the research team, the preparation of the project plan, the management of the project budget, the management of the project's public relations, the management of the project's administrative and financial affairs, and the management of the project's overall progress.

Applicants should have a postgraduate degree or equivalent, and a minimum of five years' experience in a similar post. They should also have a good knowledge of the Greater London Area and its civil defence measures.

For further details contact the Staffing Office, Polytechnic of the South Bank, Borough Road, London SE1 1NF. Tel: 01-855 8889. Ext. 333. Closing date: 12th October 1984.

The Polytechnic is an Equal Opportunities Employer (1976).

Leicester Polytechnic
School of Applied Social Sciences and Public Administration

LECTURER II/ SENIOR LECTURER: COMMUNITY DEVELOPMENT

From January 1985 or earlier if possible.
Salary: £14,087 p.a.

Applications are invited from professionally qualified and experienced persons to join an established team in the Community Development Department. The successful candidate will be responsible for the development and delivery of community development courses and for the supervision of staff. The successful candidate will also be responsible for the development and delivery of community development courses and for the supervision of staff.

For further details contact the Staffing Office, Leicester Polytechnic, 100-102, Leicester Road, Leicester LE1 7RH. Tel: 0533 5511. Ext. 333. Closing date: 12th October 1984.

Applications are invited from professionally qualified and experienced persons to join an established team in the Community Development Department. The successful candidate will be responsible for the development and delivery of community development courses and for the supervision of staff. The successful candidate will also be responsible for the development and delivery of community development courses and for the supervision of staff.

For further details contact the Staffing Office, Leicester Polytechnic, 100-102, Leicester Road, Leicester LE1 7RH. Tel: 0533 5511. Ext. 333. Closing date: 12th October 1984.

North Staffordshire Polytechnic
Department of Mining Sciences

SERC RESEARCH STUDENTSHIP

A Research studentship is available for a full-time research into the area of coal liquefaction. The successful candidate will be responsible for the development and delivery of community development courses and for the supervision of staff. The successful candidate will also be responsible for the development and delivery of community development courses and for the supervision of staff.

For further details contact the Staffing Office, North Staffordshire Polytechnic, Stoke-on-Trent ST1 4AG. Tel: 0900 8111. Ext. 333. Closing date: 12th October 1984.

NEWCASTLE UPON TYNE POLYTECHNIC

School of Marketing and Distribution

Required for 1 January 1985:

LECTURER II or SENIOR LECTURER in Marketing & Advertising

(Ref: A28/84)

The person appointed will be required to teach marketing and advertising, mainly on BTEC HND courses in the first instance. Previous experience with the BTEC approach to teaching will therefore be an advantage.

The person appointed will also be expected in time to develop a capacity to teach international marketing, at a higher level.

Opportunities to make use of teaching by the case study method can also be anticipated.

Applicants should have a first degree or higher degree in the marketing area.

Relevant business experience/a teaching qualification or experience will be an added recommendation.

Burnham FE: Senior Lecturer £11,175-£13,128 (bar) £14,061 p.a. Lecturer II £7,548-£12,089 p.a.

For further details and application forms please call our 24 hour telephone answering service (0632 323128) or write enclosing a stamped addressed foolscap envelope to Mrs Rosemary Smith, Administrative Assistant (Recruitment), Burnham FE, Newcastle upon Tyne NE1 8ST, to whom completed forms should be returned quoting the appropriate reference number by 10th October 1984. (1984)

Leicester Polytechnic
School of Applied Social Sciences and Public Administration

Required for 1st January, 1985

LECTURER II IN PUBLIC ADMINISTRATION AND POLITICS

Salary: £7,548-£12,089 p.a.

Applicants should have a postgraduate degree or equivalent, and a minimum of five years' experience in a similar post. They should also have a good knowledge of the Greater London Area and its civil defence measures.

For further details contact the Staffing Office, Leicester Polytechnic, 100-102, Leicester Road, Leicester LE1 7RH. Tel: 0533 5511. Ext. 333. Closing date: 12th October 1984.

Lancashire Polytechnic
School of Computing

Required for 1st January, 1985

SENIOR PROJECT OFFICER

SALARY £13,095-£16,467

A Senior Project Officer is required to lead a team of staff in the development and delivery of community development courses and for the supervision of staff. The successful candidate will also be responsible for the development and delivery of community development courses and for the supervision of staff.

For further details contact the Staffing Office, Lancashire Polytechnic, Preston PR1 2TQ. Tel: 0773 5555. Ext. 333. Closing date: 12th October 1984.

Lancashire Polytechnic
School of Computing

Required for 1st January, 1985

PRINCIPAL LECTURER IN FASHION

Salary: £13,095-£16,467

A Principal Lecturer in Fashion is required to lead a team of staff in the development and delivery of community development courses and for the supervision of staff. The successful candidate will also be responsible for the development and delivery of community development courses and for the supervision of staff.

For further details contact the Staffing Office, Lancashire Polytechnic, Preston PR1 2TQ. Tel: 0773 5555. Ext. 333. Closing date: 12th October 1984.

Lancashire Polytechnic
School of Computing

Required for 1st January, 1985

SENIOR PROJECT OFFICER

Salary: £13,095-£16,467

DURHAM COUNTY COUNCIL

NEW COLLEGE DURHAM

Principal: Leonard G. Bewsher, Acad. Dip.Ed. (Lond.), B.Sc. (Econ.), M.A., F.R.S.A.

FACULTY OF ADMINISTRATIVE AND BUSINESS STUDIES

LECTURER II/SENIOR LECTURER/PRINCIPAL LECTURER IN BUSINESS STUDIES

(TRAVEL AND TOURISM)

RE-ADVERTISEMENT - Previous applicants will be re-considered

Applications are invited for the above post from good honours graduates with experience of the Travel and Tourism industry to teach on courses up to and including degree level. The successful candidate will be expected to develop a capacity to teach international marketing, at a higher level.

Opportunities to make use of teaching by the case study method can also be anticipated.

Applicants should have a first degree or higher degree in the marketing area.

Relevant business experience/a teaching qualification or experience will be an added recommendation.

Burnham FE: Senior Lecturer £11,175-£13,128 (bar) £14,061 p.a. Lecturer II £7,548-£12,089 p.a.

For further details and application forms please call our 24 hour telephone answering service (0632 323128) or write enclosing a stamped addressed foolscap envelope to Mrs Rosemary Smith, Administrative Assistant (Recruitment), Burnham FE, Newcastle upon Tyne NE1 8ST, to whom completed forms should be returned quoting the appropriate reference number by 10th October 1984. (1984)

Sunderland Polytechnic
Faculty of Humanities

Required for 1st January, 1985

PRINCIPAL LECTURER IN ECONOMICS

Salary: £13,095-£16,467

A Principal Lecturer in Economics is required to lead a team of staff in the development and delivery of community development courses and for the supervision of staff. The successful candidate will also be responsible for the development and delivery of community development courses and for the supervision of staff.

For further details contact the Staffing Office, Sunderland Polytechnic, Sunderland SR1 1JF. Tel: 0191 5555. Ext. 333. Closing date: 12th October 1984.

Durham County Council
NEW COLLEGE DURHAM

Principal: Leonard G. Bewsher, Acad. Dip.Ed. (Lond.), B.Sc. (Econ.), M.A., F.R.S.A.

FACULTY OF IN-SERVICE EDUCATION, COMMUNICATIONS AND COMPUTING

TEMPORARY LECTURER II IN CURRICULUM STUDIES

Starting 1st January, 1985, or earlier if possible, a lecturer to contribute to the teaching of Curriculum Studies (with particular reference to Innovation and Development) in the initial and in-service B.Ed. degrees, with additional contributions as appropriate within a range of in-service courses. This temporary post will end 31st August 1985.

Li Salary Scale: £7548-£12089 per annum

Further details and application forms, returnable by Friday, 12th October 1984, may be obtained from: The Principal, New College Durham, Framwellgate Moor Centre, Durham DH1 5ES, on receipt of a stamped self-addressed foolscap envelope.

1984

Rumney College of Technology
Cardiff

South Glamorgan County Council

HEAD OF DEPARTMENT (GRADE III)

SCIENCE AND MATHEMATICS

Salary: £13,095-£16,467

A Head of Department in Science and Mathematics is required to lead a team of staff in the development and delivery of community development courses and for the supervision of staff. The successful candidate will also be responsible for the development and delivery of community development courses and for the supervision of staff.

For further details contact the Staffing Office, Rumney College of Technology, Cardiff CF1 1JF. Tel: 01446 5555. Ext. 333. Closing date: 12th October 1984.

Colleges and Institutes of Higher Education

SOUTH GLAMORGAN COUNTY COUNCIL
SOUTH GLAMORGAN INSTITUTE OF HIGHER EDUCATION (CARDIFF)

FACULTY OF TECHNOLOGY

DEPARTMENT OF ELECTRONIC ENGINEERING & INFORMATION TECHNOLOGY

LECTURER GRADE 1

Applications are invited for the post of Lecturer Grade 1 to teach CEI and BTEC courses in Radio, Television and Electronic Engineering or a Higher National Certificate in Electrical and Electronic Engineering or a BTEC HND in Electronic Engineering. The successful candidate will be expected to develop a capacity to teach international marketing, at a higher level.

Opportunities to make use of teaching by the case study method can also be anticipated.

Applicants should have a first degree or higher degree in the marketing area.

Relevant business experience/a teaching qualification or experience will be an added recommendation.

Burnham FE: Senior Lecturer £11,175-£13,128 (bar) £14,061 p.a. Lecturer II £7,548-£12,089 p.a.

For further details and application forms please call our 24 hour telephone answering service (0632 323128) or write enclosing a stamped addressed foolscap envelope to Mrs Rosemary Smith, Administrative Assistant (Recruitment), Burnham FE, Newcastle upon Tyne NE1 8ST, to whom completed forms should be returned quoting the appropriate reference number by 10th October 1984. (1984)

1984

Colleges and Institutes of Higher Education continued

HUMBERSIDE COLLEGE OF HIGHER EDUCATION

SCHOOL OF ENGINEERING

Applications are invited for the following full-time teaching post:

THERMO-FLUID DYNAMICS

Teaching will be at undergraduate/higher diploma levels.

Opportunities exist for laboratory development, research and consultancy. Interest in energy conservation will be of particular advantage to the School of Engineering.

Senior Lecturer £10 883 - £12 552 (bar) - £13 443

Lecturer II £ 7 215 - £11 568

Further particulars and application forms may be obtained from the Personnel Office, Humberside College of Higher Education, Cottingham Road, Hull HU6 7RT - telephone (0482) 448508.

Closing date 8th October 1984.

(1982)

HUMBERSIDE COLLEGE

THE MANAGEMENT CENTRE

Head of Personnel

Management Department

Principal Lecturer

The Management Centre's 55 tutors provide full-time and part-time postgraduate and post-experience courses, short courses, research and consultancy in management.

With eleven staff the Personnel Management Division operates a complete range of courses, including CNA A HSC, CNA A postgraduate and college diplomas and contributes to the CNA A DMS course.

The person appointed to lead the division should have appropriate management experience and academic qualifications relevant to the personnel management field.

Salary scale: £12519-£15744 pa + £258 London fringe (under review).

For further details and an application form please send an A5 AAE to:

Vice-Principal, Slough College of Higher Education, Wellington Street, Slough SL1 1YG. Closing date 12th October 1984.

1980

CENTRAL SCHOOL OF SPEECH AND DRAMA

Burnham Grade V with Vice Principal's Allowance and London Weighting (£16,727-£18,428 per annum currently under review.)

Applications are invited for the post of a Head of Department for the School with additional responsibility as Vice Principal.

The School offers a range of courses in Speech and Drama including a 4-year B.Ed., 4-year B.Sc. in Speech Therapy, 3-year Acting Diploma, 2-year Diploma in Stage Management and several one year postgraduate courses in related areas.

Candidates for this important post should have appropriate academic qualifications and background related to one or more of the range of disciplines outlined above and/or Higher Education. The person appointed will essentially be responsible for the management of the School's single department comprising all courses. He/she should be energetic and imaginative and able to make a significant contribution to the work both at Department level and the School as a whole.

The Central School is an Equal Opportunities Employer.

Further particulars and application forms which should be returned by 18th October, available from Mrs Peggy Whinn, Principal's Secretary, Central School of Speech and Drama, Embassy Theatre, Eton Avenue, London NW3 5JY.

(20400)

BATH COLLEGE OF HIGHER EDUCATION

(Incorporating BATH ACADEMY OF ART)

Applications are invited for appointment as a

Senior Lecturer

in

Computer Education

from 1st January 1985.

Further details may be obtained from the Director, Bath College of Higher Education, Newton Park, Newton St. Lo, Bath, Avon BA2 8RN (Tel: 01223 30171) to whom applications (no forms) should be returned by 15th October 1984. Candidates who apply late may wish to be now considered, need only submit a request for consideration. Their applications will be considered on a rolling basis.

(20449)

HAMPSHIRE COUNTY COUNCIL

Southampton Institute of Higher Education

Department of Construction and Land Use

Principal Lecturer in Surveying and Estate Management

Required to take charge of Surveying and Estate Management courses in the Department, to develop FICS courses and to teach relevant subjects within the main discipline area.

Applicants should preferably be qualified by degree, be corporate members of an appropriate body, and have a wide experience of surveying work generally.

Salary scale: £13,095-£16,467 (bar point £14,580)

Department of Design

Senior Lecturer in Scientific and Technical Illustration

To be responsible as Course Supervisor for the administration and development of BTEC National Diploma and College courses. An understanding of computer technology developments in this area is essential.

Salary scale: £11,175-£14,061 (bar point £13,128)

Lecturer II in Graphic Design/Packaging

To teach on BTEC Higher National Diploma and National Diploma courses. Knowledge of Computer Graphics Systems and a forward-thinking attitude in relation to the developments in design and production is required.

Lecturer II in Typographic Design

Experience in computerized design origination and vocational teaching experience on advanced BTEC design courses is required.

Salary scale: £7,548-£12,089

Department of Electrical Engineering and Marine Electronics

The following 'New Blood' appointments have arisen due to retirements occurring in this Department.

Principal Lecturer in Electronic Engineering

To lead new developments in HND and EC Part II courses. Applicants should be graduates or equivalent and have substantial teaching experience at this level.

Salary scale: £13,095-£16,467 (bar point £14,580)

Lecturer II in Microelectronics

To assist with HND and short course programmes. Applicants should be graduates or equivalent and have recent industrial experience.

Salary scale: £7,548-£12,089

Lecturer II Electronics

To assist with HND and HNC programmes in electronic and communication engineering. For this post professional qualifications, including those in marine electronics will be acceptable.

Salary scale: £7,548-£12,089

Department of Mathematics and Computing

Two Lecturer IIs in:

(i) Systems Analysis and Design

(ii) Information Technology

Applicants should have a relevant degree and/or experience in industry or teaching.

Salary scale: £7,548-£12,089. (On the current level of work it is expected that these posts would progress to the SL scale.)

The following temporary posts are available commencing 1st January 1985 and terminating on 31st December 1985.

Temporary Lecturer II in Business Studies (Secretarial Studies)

To teach secretarial skills on RBA Personal Assistant's Diploma, RBA Secretary's Diploma and LCC Private Secretary's Certificate and High with course supervision.

Candidates should have a degree or diploma in a business or secretarial subject area and ideally be teacher trained.

Salary scale (under review): £11,175-£14,061 (bar point £13,128)

Temporary Lecturer II in Management Studies (Organisational Behaviour)

To lecture on organisational behaviour to a wide range of post-graduate, professional and supervisory courses.

Candidates should ideally have a degree, higher degree or diploma in management studies or similar qualification in an associated behavioural area, be teacher trained and have experience in industry or commerce.

Salary scale: £7,548-£12,089

Further details and application forms available from The Staffing Section, Southampton Institute of Higher Education, East Park Terrace, Southampton, Hants, SO9 4WW. Telephone Southampton 29351, Extension 312.

Closing date: 12th October 1984.

(1985)

ST MARY'S COLLEGE

Strawberry Hill, Twickenham

St. Mary's College is a Roman Catholic College of Higher Education and offers undergraduate courses leading to two-subject BA/BSc/BSc Honours degrees of the University of Surrey, as well as a variety of postgraduate courses. Currently, courses leading to University of London qualifications are being phased out. The College has about 1200 students of whom approximately half are registered for BA/BSc degrees and half for the BEd degree.

Whilst applicants must meet the specific requirements outlined below, recent school teaching experience would be advantageous.

LECTURER IN FRENCH

Required for January 1985 to teach French language to undergraduate level, methodology of language teaching, and 17th/18th century literature.

Salary Scale: Burnham FE/HE LII/SL plus London Allowance.

Closing date for receipt of applications: Monday 15 October 1984.

Further details from:

The Principal

St Mary's College

Widdegrave Road, Strawberry Hill, Twickenham, Middlesex TW1 4BX

(1985)

College of St. Mark & St. John

Lecturer II/ Senior Lecturer

COMPUTING/ COMPUTER EDUCATION

Required for January 1985 a person suitably qualified and experienced to teach on and continue to develop a range of courses, including B.Ed. (Initial and in service) DipM.Ed. B.A. (Humanities) and B.A. (Recreation and Community).

The person appointed will have the opportunity of being involved in the College's wide range of service which is now being developed and of working in liaison with members of the L.T.A. collaboration based at the college.

For further details and application forms contact the Principal's Secretary, College of St. Mark and St. John, Weymouth, Dorset DT4 8JH. Tel: 0752 777/66 Ext. 218. (1982)

Badford College of Higher Education

LECTURER II IN PSYCHOLOGY OF PERFORMANCE

Applications are invited for the above post from January 1985. Candidates should have a B.A. (Hons) (Physical Education) degree and should also have a higher degree or experience in the field of psychology of sports performance.

Qualifications in teaching and experience in an aspect of outdoor pursuits would be a distinct advantage.

Applications and further particulars from The Director, Badford College of Higher Education, Box 442, BAH. (0234 45151).

Badford College is an Equal Opportunities Employer.

(Rearrangement - previous applicants need not

Colleges and Institutes of Higher Education continued

LECTURER II/ SENIOR LECTURER/ PRINCIPAL LECTURER - 3 POSTS

Applications are invited for the above posts. Those appointed will teach on, and develop, B. Eng., HND/C and related courses for industry in Electronic and Instrumentation Engineering. Applicants should normally be chartered engineers qualified to supervise level with recent industrial or research experience and able to supervise student project work and contribute to consultancy and research. Current research is in D.S.P., microelectronics, instrumentation and control and the applications of micro-processors. There is an immediate need for specialists in digital communications, but applications may come from any appropriate field.

Salary Scales: Lecturer II £7,215 - £11,588
Senior Lecturer £10,683 - £13,443
Principal Lecturer £12,510 - £15,744

Further details and application forms may be obtained from the Deputy Registrar, to whom completed applications should be returned by 9th October 1984. (020481)



Roehampton Institute

WHITELANDS COLLEGE

The College Governors seek to appoint from 1st April 1985 a suitable suitably qualified communicant member of the Church of England as the

PRINCIPAL of Whitelands College

a Voluntary Church of England College of Higher Education, and one of the four federated Colleges of the Roehampton Institute, offering a wide range of undergraduates and post-graduate courses validated by the University of Surrey. The Principal is required to be resident.

Salary: in the range £18,882 - £20,577 p.a. with London Allowance £987 p.a.

Full details of the post and application forms may be obtained from the Clerk to the Governors (Miss Brenda Robinson) at Whitelands College, West Hill, London SW15 3SN. (Tel: 01-788 8288).

Closing date for applications: 22nd October, 1984. (16115)

HUMBERSIDE COLLEGE OF HIGHER EDUCATION

Applications are invited for the following key post:

HEAD OF SCHOOL APPLIED SOCIAL STUDIES Grade V: £15,390 - £17,091

Further particulars and application form from: The Personnel Office, Humberside College of Higher Education, Cottingham Road, Hull HU6 7RT. Telephone: 0482 446506

Closing date: 8th October, 1984



HUMBERSIDE COLLEGE



SOUTH GLAMORGAN INSTITUTE OF HIGHER EDUCATION - CARDIFF

FACULTY OF EDUCATION

DEAN OF FACULTY OF EDUCATION GRADE 6

Applications are invited from professionally qualified and experienced persons for the above appointment to commence duties on 1 January 1985.

SALARY SCALE: £17,397-£19,170

Further particulars and application forms may be obtained from The Personnel Office, South Glamorgan Institute of Higher Education, Cyncoed Centre, Cyncoed Road, Cardiff CF2 8XD.

Completed application forms should be returned within fourteen days of the publication of this advertisement. (20487)



SOUTH GLAMORGAN INSTITUTE OF HIGHER EDUCATION - CARDIFF

FACULTY OF TECHNOLOGY

HEAD OF SCHOOL OF MARITIME STUDIES - GRADE 4

Applications are invited from professionally qualified and experienced persons for the above appointment to commence duties as soon as possible.

SALARY SCALE: £14,148-£15,849 (Pay award pending)

Further particulars and application forms may be obtained from The Personnel Office, South Glamorgan Institute of Higher Education, Cyncoed Centre, Cyncoed Road, Cardiff CF2 8XD. Completed application forms should be returned within fourteen days of the publication of this advertisement. (20488)

Bulmershe College of Higher Education

Required for January 1985 (or as soon as possible thereafter).

PRINCIPAL LECTURER/READER in SCHOOL MANAGEMENT

to contribute to the further development of teaching and research in an established field of College work. Evidence of substantial academic achievement will be sought. Further particulars and application forms may be obtained from: The Deputy Principal, Bulmershe College of Higher Education, Woodlands Avenue, Earley, Reading, RG6 1HY. Tel: Reading (0734) 882397.

Completed forms to be returned by 24 October 1984. Berkshire County Council is an equal opportunity employer. (18942)

Christ Church College of Higher Education Canterbury

Applications are invited for the following posts vacant from January 1985:

ADMISSIONS TUTOR

to be responsible for the recruitment of students and the publicity of college courses.

SCHOOLS TUTOR

to be responsible for liaison with schools and teaching practice arrangements. The holder of the post will contribute to the teaching programme of the college. The College has approximately 1000 students and offers a range of undergraduate and postgraduate courses.

Salary scale: Senior Lecturer £14,148 - £15,849.

For further details write to Mrs. Joan A. Robinson, Assistant to the Principal, Christ Church College, Canterbury, enclosing a stamped addressed envelope, to whom applications should be sent not later than 15th October 1984.

Completed application forms should be returned to the Deputy Registrar, 10th October 1984. (16488)

Administration

The Universities Central Council on Admissions (UCCA)

GENERAL SECRETARY

Applications are invited for the post of General Secretary of the UCCA. The successful candidate will be responsible for the day-to-day running of the Council, which is a non-profit making organization. The post is full-time and requires a person with a high level of administrative ability and experience in the field of higher education.

The initial appointment is for the remainder of the existing contract (until 31 July 1985) but an extension for a further two years is likely to be confirmed shortly.

Application forms and further information may be obtained from The Personnel Office, (HQS) RACS, Shrewsbury, Shropshire, Shire, SN6 8LA. Tel: (0793) 782851 ext. 421.

Closing date for applications 19th October 1984. (20489)

Courses

Royal Northern College of Music 1985 Entry

Applications are invited for entry in September 1985.

Applicants should note the closing date for receipt of applications is 17 October 1984.

Auditions for undergraduate entry will be held mainly in the period November to December 1984.

Details and application forms are available from the Secretary for Admissions, Royal Northern College of Music, 150 Piccadilly, Manchester, M1 1BB. Tel: 061-275 9285. (20491)

General Vacancies

IBM-PC Programmer

Ground floor opportunity with new non-union software house. IBM-PC programmer with experience in business systems. Salary £10,000 - £12,000 p.a. depending on experience. Further details and application forms may be obtained from: The Personnel Office, South Glamorgan Institute of Higher Education, Cyncoed Centre, Cyncoed Road, Cardiff CF2 8XD. Completed application forms should be returned within fourteen days of the publication of this advertisement. (20487)

Holidays and Accommodation

PALMA 1-2-3 weeks. Christmas/New Year on modern 2nd floor. Fully equipped kitchen, wine, 24hr service. Tel: 01-275 9285. (20491)

Colleges and Institutes of Technology

Metropolitan Borough of Stockport STOCKPORT COLLEGE OF TECHNOLOGY

HEAD OF DEPARTMENT (GRADE 5)

Mechanical & Production Engineering

Salary: £15,390-£17,091 (currently under review)

Applications are invited from suitably qualified persons for the important post, duties to commence 1 January 1985. Further particulars and application forms may be obtained by sending a stamped self-addressed A4 envelope to:

The Principal
Stockport College of Technology
Wellington Road South
Stockport SK1 3UQ
Tel: 061-480 7331

Completed forms must be returned no later than Friday 12 October 1984. (18952)



Research and Studentships

Cranfield

RESEARCH OFFICERS

Computing for Fracture Problems

This is a new post within the Computational Mathematics Group concerned with the development of existing two-dimensional fracture programmes into an integrated and flexible software package. A suitable candidate might also contribute at research level and register for a higher degree in connection with the work. A knowledge of scientific programming is required together with a degree in a scientific subject.

The appointment (R01B scale £8,310-£8,530 p.a.) is for one year in the first instance with the possibility of further funding for a suitable applicant.

Numerical Methods for Fracture Problems

The Computational Mathematics Group has an immediate vacancy for a research worker to develop boundary element methods for three-dimensional crack problems under a contract with the aircraft industry.

An appointment at R0 1A (£8,310-£11,615 p.a.) for post-doctoral (or equivalent) researchers is envisaged, although applications from suitably qualified graduates for an R0 1B (£6,310-£9,875 p.a.) post will be considered.

The initial appointment is for the remainder of the existing contract (until 31 July 1985) but an extension for a further two years is likely to be confirmed shortly.

Application forms and further information may be obtained from The Personnel Office, (HQS) RACS, Shrewsbury, Shropshire, Shire, SN6 8LA. Tel: (0793) 782851 ext. 421.

Closing date for applications 19th October 1984. (20490)

LIVERPOOL POLYTECHNIC PLYMOUTH POLYTECHNIC

Two Honours Graduates required as RESEARCH ASSISTANTS

To undertake a national two year research project: Plymouth student to be engaged mainly in the field of management/personnel factors.

Liverpool student to be engaged mainly in technology and operational factors.

(Posts commence 1st November or earlier by arrangement)

Application forms can be obtained from:

L A Holder
Maritime Studies
Liverpool Polytechnic
Byrom Street
Liverpool L3 3AF
Tel 051 207 8581
Ext 2059

D H Moreby
Faculty of Maritime Studies
Plymouth Polytechnic
Drake Circus
Plymouth PL4 8AA
Tel 0752 284664

Research and Studentships continued

LEGAL RESEARCH

Private Solicitors Practice

The post is a full-time or part-time position as joint leader of the research and training department of a firm of solicitors in Central London. The field to be covered is property law.

The job specification includes assembling and digesting up to date case law and legal developments, preparing material for education training and publication and a small participation in provision of internal lectures to staff.

Applications together with CV and names of two referees should be forwarded to John M. Samson, Harrold Nathanson, 78 Jermyn Street, London, SW1Y 6NR.

Informal enquiries may be made to Dr. C. Thornton (Tel: Ext 4341).

Closing date for the receipt of applications is 19th October 1984.

University of York

RESEARCH ASSISTANT

in the Department of Psychology to work with Dr. Charles M. Frith on a project to investigate the development of short-term memory in children. The project is for two years and will involve testing subjects in normal children and children suffering from cognitive impairment. Some travelling to test children will be involved and possession of a driving licence would be an advantage.

The post would be suitable for a recently qualified graduate in psychology. Some experience of working with children would also be an advantage.

Salary will be at the rate of £4,148 in the second year rising to £4,148 in the second year of the appointment. Refuse to be considered.

Two copies of applications, with full curriculum vitae and two references, should be sent to the Registrar, Department of Psychology, University of York, Heslington, York YO1 5DD, by 19 October 1984. Informal enquiries may be made to Dr. Charles M. Frith (Tel: 01904 336000).

Heriot-Watt University

Department of Offshore Engineering

RESEARCH ASSOCIATE

The successful applicant will work within a small research team involved in a major project on the design of offshore structures. The project involves the development of a computer simulation of the dynamic behaviour of offshore structures under wave loading. The successful candidate should have a degree in a relevant field and experience in the design of offshore structures.

Salary will be in the range £6,310 - £8,530 p.a. depending on experience. The appointment will be for one year in the first instance.

Application forms can be obtained from the Registrar, Heriot-Watt University, Edinburgh EH1 1JX, to whom completed forms should be returned by 19th October 1984. Informal enquiries may be made to Dr. J. W. W. (Tel: 0131 275 5555).

Queen Mary College (University of London)

PROJECT ON THE WIDER LABOUR MARKET EFFECTS OF THE YOUTH TRAINING SCHEME

Applications are invited for a post of research officer on a project to investigate the wider labour market effects of the Youth Training Scheme. The project is for one year and will involve working with a large number of young people who have completed the scheme. The successful candidate should have a degree in a relevant field and experience in research.

Salary will be in the range £6,310 - £8,530 p.a. depending on experience. The appointment will be for one year in the first instance.

Application forms can be obtained from the Registrar, Queen Mary College, University of London, Mile End Road, London E4 3DF, to whom completed forms should be returned by 19th October 1984. Informal enquiries may be made to Dr. J. W. W. (Tel: 0131 275 5555).

Polytechnic of The South Bank

Department of Applied Biology

AGRICULTURAL & FOOD RESEARCH COUNCIL STUDENTSHIP

The project will involve research into the role of food processing in the development of new products. The successful candidate should have a degree in a relevant field and experience in research.

Salary will be in the range £6,310 - £8,530 p.a. depending on experience. The appointment will be for one year in the first instance.

Application forms can be obtained from the Registrar, Polytechnic of The South Bank, 100 Borough Road, London SE1 1AA, to whom completed forms should be returned by 19th October 1984. Informal enquiries may be made to Dr. J. W. W. (Tel: 0131 275 5555).

University of St Andrews

POSTDOCTORAL RESEARCH ASSISTANT IN NUMERICAL RECONNECTION

Applications are invited for a post of research assistant on a project to investigate the numerical reconnection of magnetic fields. The project is for one year and will involve working with a large number of magnetic fields. The successful candidate should have a degree in a relevant field and experience in research.

Salary will be in the range £6,310 - £8,530 p.a. depending on experience. The appointment will be for one year in the first instance.

Application forms can be obtained from the Registrar, University of St Andrews, St Andrews, Fife KY16 9SS, to whom completed forms should be returned by 19th October 1984. Informal enquiries may be made to Dr. J. W. W. (Tel: 0131 275 5555).

The University of Lancaster

Centre for Applied Statistics

RESEARCH CONSULTING FELLOW

Applications are invited for the position of Research Consulting Fellow in the Centre for Applied Statistics. The successful candidate should have a degree in a relevant field and experience in research.

Salary will be in the range £6,310 - £8,530 p.a. depending on experience. The appointment will be for one year in the first instance.

Application forms can be obtained from the Registrar, University of Lancaster, Bailrigg, Lancaster LA1 4YW, to whom completed forms should be returned by 19th October 1984. Informal enquiries may be made to Dr. J. W. W. (Tel: 0131 275 5555).

City of Birmingham Polytechnic

Faculty of Engineering and Science

SERC RESEARCH GRANT "A MICROCOMPUTER CONTROLLED PRESS FEEDING AND SUPERVISORY SYSTEM"

Two research assistants required to work on the above project in association with industry.

The award is for two years. Successful candidates may be able to register for higher degrees.

Applicants should have either a higher degree or at least an Upper Second Class Honours degree in Engineering, Physics or a related subject.

Salary: £7,548 - £8,910 n.a. plus annual increments.

Further details and application forms may be obtained by 18th October 1984 from: The Personnel Office, City of Birmingham Polytechnic, Block 1, Perry Barr, Birmingham B4 7ET. Tel: 051-539 3411, Ext. 4344.

Closing date for the receipt of applications is 19th October 1984.

IMMEDIATE ADVANCES £100 to £20,000

Written terms on request. Regional Trust Ltd, 31 Dover Street, Piccadilly, London W1A 1AA. Tel: 01-491 2934 or 489 3416 L0005

Colleges of Art

SURREY COUNTY COUNCIL EPSOM SCHOOL OF ART AND DESIGN

Applications are invited for the following posts for January 1985:

Department of Communication Design SENIOR LECTURER

An experienced and versatile Designer is required to join the team on the B/TEC Higher National Diploma in Graphic Design. He/she will be responsible for the quality of design across all aspects of the course, and must have a broad knowledge of recent developments in communication. Applicants should also have a commitment to Computer Aided Design and Information Technology.

LECTURER II

A creative Graphic Designer is required to teach on the B/TEC National Diploma in Graphic Design, responsible in the first instance to the course leader for quality of design and its development across all aspects of the course.

Department of Fashion Design LECTURER I

To teach Pattern cutting and production to first and second year students on the B/TEC National Diploma in Fashion courses. Candidates should have recent industrial experience as either a Designer or Pattern Cutter. Teaching experience would be an added advantage.

Department of Three Dimensional Design LECTURER I in JEWELLERY

To teach material studies, all aspects of drawing and the design and manufacture of jewellery to students on the B/TEC National Diploma in Design Crafts: Jewellery/Ceramics course. An interest in Computer Aided Design is desirable and experience of teaching in Further Education is necessary.

LECTURER I in CERAMICS

To teach prototype development and manufacture, design drawing and modelling to students on the B/TEC Design Crafts: Jewellery/Ceramics courses. An interest in Computer Aided Design is desirable and experience of teaching in Further Education is necessary.

Computer-aided Design/Image Processing LECTURER II

To assist in the provision of introductory courses, the development of non-standard micro systems, the development of new computer applications in design, and computer animation.

Salary range (inclusive of Surrey Allowance)
SENIOR LECTURER - £11,433-£14,319 (Bar at £13,388)
LECTURER II - £7,806-£12,357
LECTURER I - £6,188-£10,770

No forms: Letters of application together with a curriculum vitae and the names, addresses and status of two referees should be submitted to the Vice Principal, Epsom School of Art and Design, Ashley Road, Epsom, Surrey KT18 5BE by MONDAY 3 OCTOBER. 1984

Personal

BOOK PUBLISHER

Invites AUTHORS to send manuscripts for publication. All categories considered including POETRY, and NEW AUTHORS are welcome.

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SOMERSET COLLEGE OF ARTS AND TECHNOLOGY TAUNTON

Appointment of Principal

Following the retirement of the present Principal, applications are invited for the post of Principal of this Group 7 College.

Candidates should have substantial experience in industry as well as in further education and should be able to demonstrate that they have the skills and vision needed to manage a large and important college at a time when the further education service faces unique challenges.

Salary: £22,911-£23,958 (1984 Burnham pay award).

Application form and further particulars (SAE) from the Staffing (T) Section, Education Department, County Hall, Taunton, TA1 4DY. Closing date 15th October 1984. (18934)

Awards

The Leverhulme Trust

RESEARCH AWARDS ADVISORY COMMITTEE INDIVIDUAL AWARDS FOR 1985

RESEARCH FELLOWSHIPS AND GRANTS

Awards of up to £3,500 to senior persons pursuing their own investigations (but not for higher degrees or equivalent). Awards for 3 months to 2 years. No subject of enquiry excluded. Applicants must have been educated in the U.K. or other part of the Commonwealth and be normally resident in the U.K.

Application form F2C. Closing date Tuesday, 13th November 1984.

EMERITUS FELLOWSHIPS

Awards of up to £4,000 a year for 1 or 2 years to persons who have recently reached or are about to reach retirement age to enable them to complete research. Persons with an established record of research who have retired early may also be considered. Applicants must have held academic positions in universities or other institutions of similar status in the U.K.

Application form F6C. Closing date Friday, 30th November 1984.

Somerset County Council

SOMERSET COLLEGE OF ARTS AND TECHNOLOGY TAUNTON

Appointment of Principal

Following the retirement of the present Principal, applications are invited for the post of Principal of this Group 7 College.



NANYANG TECHNOLOGICAL INSTITUTE

CAREER OPPORTUNITIES IN SINGAPORE FOR ENGINEERING PROFESSIONALS

Career opportunities exist in Singapore for engineering professionals who like teaching and are looking for challenging jobs in tertiary institutions.

The Nanyang Technological Institute, fully supported by the Government of Singapore, offers engineering degree courses with an emphasis on engineering applications. It aims at producing practice-oriented engineers. The Institute is one of the two institutions in Singapore that provide engineering education at the university level.

There are vacancies in the Institute's three schools of engineering. Candidates specialising in the following areas are particularly needed:

Civil & Structural Engineering

Structural and construction engineering
Water resources and environmental engineering
Geotechnical and transportation engineering
Engineering mathematics and computing
Engineering economics and accounting
Surveying and mapping

Electrical & Electronic Engineering

Digital electronics and communications
Digital control systems
Control and instrumentation
Computer engineering software and hardware
Data base/data communication technology
Computer aided design, manufacture and testing
Electrical drives and traction

Mechanical & Production Engineering

Marine technology
Engineering production
Mechanical design
Mechanical engineering

QUALIFICATIONS

Candidates should have —
a) Higher degrees in relevant fields of engineering, and
b) Sound professional/teaching experience in engineering

ANNUAL EMOLUMENTS

Professor	from \$511,808 to \$518,333
Associate Professor	from \$52,738 to \$512,737
Senior Lecturer	from \$55,807 to \$5105,859
Lecturer	from \$55,844 to \$55,850

US\$1 to \$52,10

The gross annual emoluments include a 13th month allowance and an incentive payment equivalent to a half-month's salary payable to eligible staff in December and July respectively every year.

The level of appointment and the point of entry will depend on candidates' qualifications and experience.

In addition to the salary, the Institute contributes 25% of the staff member's monthly salary towards the Central Provident Fund Scheme. The staff member also contributes 25% of his monthly salary to this Fund but his contribution is currently subject to a maximum of \$5,1250 a month. The amount standing to the credit of the staff can be withdrawn when he reaches the age of 55 or when he leaves Singapore/Malaysia permanently. The sum withdrawn is his exempt.

The Institute provides housing at a highly subsidised rate. Other benefits include car loan, education allowance, sitting-in allowance, medical benefits, annual leave and passage assistance.

The Institute encourages its staff members to undertake outside consulting work of a specialist nature. Staff members are permitted to own and retain such consultation fees up to 60% of their annual gross salaries.

Candidates wishing to be considered should write to —

The Registrar

NANYANG TECHNOLOGICAL INSTITUTE
Upper Jurong Road, Singapore 2263

giving their curriculum vitae and the names and addresses of three referees.



NATIONAL UNIVERSITY OF SINGAPORE CENTRE FOR EDUCATIONAL TECHNOLOGY

Applications are invited for appointment to post of Assistant Director/Deputy Director in the Centre for Educational Technology in the National University of Singapore.

Candidates should possess relevant postgraduate qualifications and experience in the area of educational or instructional systems technology. Preference will be given to those holding a similar position at a tertiary institution.

The successful candidate will assist the Director of the Centre in providing a range of instructional and media support services to the teaching and research staff of the University.

The candidate should have a wide practical experience in instructional and media design and development, multi-media packaging, developing independent study centres/careers, producing, editing and scripting educational and instructional video programmes using professional Colour U-matic portapak and studio-based equipment. The candidate is also expected to conduct educational communications, media design, the academic and non-academic staff.

Shortlisted candidates may be required to submit a sample of their video productions and/or other instructional or learning packages developed by them.

Gross annual salary range as follows:

Assistant Director	\$530,800-63,000
Deputy Director	\$557,590-101,930
(Sg. £) = \$82.74 approximately	

Leave and medical benefits are provided. Under the University's Academic Staff Provident Fund scheme, the staff member contributes at the rate of 25% of his salary subject to a maximum of \$51,250 to the Fund, while the University contributes 25%.

The sum standing to the staff member's credit in the Fund, which is tax exempt, may be withdrawn when the staff member leaves Singapore/Malaysia permanently, or on reaching the age of 55.

Depending on the type of contract offered, other benefits may include: a sitting-in allowance of \$51,000 or \$52,000, subsidised housing at rental ranging from \$5120 to \$5216 p.m., education allowance for up to three children, subject to a maximum of \$510,000 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore.

Application forms and further information on terms and conditions of service may be obtained from:

The Director
Personnel Department
National University of Singapore
Kent Ridge
Singapore 0511

NUS Overseas Office
c/o Singapore High
Commission in London
5 Cheamham Street
London SW1
U.K.
Tel: (01) 235-4562 (10635)

THES FORTHCOMING Special Book Numbers

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Special Feature

THE UNIVERSITY OF NEW SOUTH WALES Equality of employment opportunity is University policy FACULTY OF MILITARY STUDIES Royal Military College Duntroon, Canberra, ACT DEPARTMENT OF COMPUTER SCIENCE

LECTURER (Ref. 007)

Applicants should have high academic qualifications in Computer Science and teaching and/or research experience. A broad interest in computer science is preferred, and particular interest in data base, data communications and information systems advantageous.

The appointee will teach in the undergraduate programme in the Department which offers a major in Computer Science and a sub-major in Information Systems. The successful applicant will be required to pursue an active research programme and supervise Masters and Doctoral students.

Position available from January 1985 and appointment will be on the basis of a contract containing provision for conversion to tenure.

Salary: A\$24,840 range A\$32,634. Commencing salary according to qualifications and experience.

Applications close 28 October, 1984.

Applicants should forward two copies of their curriculum vitae, including telephone number during business hours and the names and addresses of two referees, to the Personnel Officer, Faculty of Military Studies, Royal Military College, Duntroon, Canberra, ACT 2600, Australia.

(102495)



THE NEW SOUTH WALES INSTITUTE OF TECHNOLOGY SYDNEY, AUSTRALIA

Equal Employment Opportunity
in Institute Policy
FACULTY OF SCIENCE

LECTURESHIP IN ORGANIC CHEMISTRY SCHOOL OF CHEMICAL AND EARTH SCIENCES

Applications are invited for the position of Lecturer in Organic Chemistry within the School of Chemical and Earth Sciences. The School offers a four year Bachelor Degree, which includes a one year industrial component, and higher degrees by research.

The Department of Chemistry has an academic staff establishment of 19, whose research interests include mechanistic organic chemistry, spectroscopy, colloid and surface chemistry, electrochemistry, corrosion, analytical techniques, environmental chemistry, solid state chemistry and computer assisted learning. High calibre applicants are sought who possess a Doctoral degree and an active research interest in organic chemistry. The area of interest is unspecified but a commitment to industrially orientated research may be an advantage.

Salary will be in the range of A\$24,840 p.a. to A\$32,634 p.a.

CONDITIONS OF APPOINTMENT

Fares and a contribution toward removal expenses are provided for overseas appointees. A Housing Loan Scheme is also available. With consent of Council, academic staff are permitted to undertake limited consulting work.

Applications should include full details of academic and professional background. The names and addresses of three referees, from whom confidential reports may be obtained, should be included. In reply please quote reference No. 84/158. Applications close 19th October, 1984.

Details of conditions of employment and further information regarding the Institute can be obtained from:

The Director,
N.S.W. Government Office
66 Strand
LONDON WC2R 0AZ

THE TIMES SUPPLEMENTS' REPRINT SERVICE BUSINESS & TECHNICIAN EDUCATION

An 8 page feature containing contributions from Mr H.N. Raine, Chairman of the Business and Technician Education Council, Sir Robert Telford, Chairman of Marconi, and Dr George Trolley, Head of Quality at the Manpower Services Commission. To name but a few. First published in THES in March 1984. Price 80p.

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A 6 page survey that discovers how academics in seven disciplines (Civil engineering, History, Economics, Physics, Politics, Chemistry and Architecture) regard the standing of their subjects. Compiled from reports in the THES in December 1982 and August 1983. Price 50p.

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Western Australian Institute of Technology

Division of Business and Administration

The Western Australian Institute of Technology is a major tertiary institution whose main campus is located at Bentley in metropolitan Perth. It has a total student population of approximately 12,000 of whom some 3,300 are enrolled in courses in the Division of Business and Administration. Of these, about 2,600 are enrolled in undergraduate and 700 in postgraduate courses. The Institute offers Bachelors and Masters degrees and provides opportunities for advanced post-graduate research.

The senior academic management of the Division consists of a Dean, a Head of Graduate Studies, Head of Undergraduate Studies and the Heads of each of the five teaching Schools in the Division, viz. Accounting, Business Law, Computing & Quantitative Studies, Economics & Finance and Management.

HEAD UNDERGRADUATE STUDIES Salary \$43,929

The Division of Business and Administration now seeks to fill the newly created position of Head of Undergraduate Studies.

The appointee will control the common core segment of the undergraduate programmes and, in conjunction with the Heads of teaching Schools, provide effective leadership for the Division's undergraduate programmes and coordinate its undergraduate operations. The Head of Undergraduate Studies will also promote involvement at undergraduate level with other educational institutions, business, industrial, governmental and professional bodies.

The successful applicant will have considerable experience in a tertiary institution, specifically in the academic guidance of undergraduate students and the design and management of pertinent academic programmes. A higher degree in a business discipline, extensive teaching and research experience and administrative ability are necessary. Appropriate industrial or commercial experience would be a distinct advantage.

This is a tenured appointment. The duties of Head of Undergraduate Studies will be assigned for an initial period of six years with eligibility for renewal. Should the assignment of duties not be renewed, the academic level and salary are retained. (Ref 704).

Salary: The salary quoted is subject to an increase of approx. 2% in April 1985. Conditions include fares for appointee and family plus assistance with removal expenses, superannuation. Applications: Details including the names and addresses of three referees should be submitted in duplicate not later than 12 October 1984 to the Executive Officer, Western Australia House, 115 Strand, London WC2R 0AZ. When applying please quote Ref. No. and Code HES.

University of California The Department of Rhetoric at Berkeley is seeking an ASSISTANT PROFESSOR

(needing budgetary approval) with training in classical languages to teach graduate and undergraduate courses in Greek and Latin rhetorical theory in the context of Ancient Social, Political or Intellectual History and Undergraduate. Argumentative writing. Ph.D. teaching experience, and publication of substantial evidence of scholarly potential required. Applicants with exceptional qualifications who currently hold a non-tenure position may be considered for an Associate Professorship with tenure.

Send resume, references and names of three referees by December 1, 1984, to: Thomas D. Sloane, Acting Chairman, Department of Rhetoric, University of California, Berkeley, California 94720.

The University of California is an Equal Opportunity Affirmative Action Employer. (34019) 1615

National Economic Development Office ECONOMISTS

The National Economic Development Office which provides the innovative and administrative link between management, unions and Government in promoting improved economic and industrial performance and competitiveness has several vacancies:

* For two economists, to work closely with the Economic Director and to be involved in all the analytical and economic policy activities of the Office. Papers need to be written against tight deadlines, using up-to-date techniques, but in plain language for non-specialists and often for publication. Relevant skills and experience range from applied economics to industrial microeconomics. Amongst those interested in these posts might be persons wishing to arrange secondment from an existing teaching or research position. The salary for the above posts, currently under review, is in the region of £13,500 to £15,000.

* For an Administrative Assistant, who will be responsible for providing a team of professional economists with research and administrative support including the extraction of economic data and assistance with economic research projects such as econometric analyses. A sound knowledge of economics (to degree level) will be required. The starting salary, under review, will be in the region of £7,000 rising by annual increments to over £8,000.

The above posts which carry a non-contributory pension scheme are based in London.

Application forms may be obtained from:

Personnel Section
National Economic Development Office
Millbank Tower, Millbank, London SW1P 4QX.
Telephone: 01-211 4814

Closing date for applications Friday 12 October.

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The work will require a reasonable amount of travel, mostly within the UK.

Probably aged 21-35, you should be qualified to HNC/degree, preferably with a good knowledge of CAD/CAM systems. We are particularly interested in applicants with experience in PCB or mechanical design, systems management, or programming (especially FORTRAN or NEWAR).

A training background would be useful, but is not essential.

We offer an attractive salary and benefits package which includes profit sharing, BUPA, pension scheme and free life assurance.

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COMPUTERVISION

Building Centre Trust Resourceful ADMINISTRATOR/ SECRETARY

needed for the new Centre for Educational Resources for the Construction Industry. The successful candidate will work for the Director of the Centre and will also assist and administer the work of the resource staff.

Responsibilities include: organising seminars, preparation of newsletters and information handouts, liaison with various organisations to build up and exchange information, secretarial duties.

The appointment is a key one where the candidate (graduate preferred) will be responsible in the organisation and development of the Centre. Experience in one of the following fields would be advantageous: educational support material, audio visual aids, the construction industry, computer data base techniques and word processing.

Salary: circa £10,000 p.a.

Apply: Clark to the Governors, Building Centre Trust, 25 Store Street, London WC1R 7BT. (0256) 781.

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